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# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Vol. 5

Washington, D. C., January 17, 1924

No. 1

## GENERAL NOTES

A conference called by Doctor Nelson, on the present status of the antelope in the United States, which met on December 14 in the U. S. National Museum, was attended by conservationists interested in the subject from all parts of the country. The heads of the State game commissions of California, Massachusetts, and other States, were present, and the Canadian Government was represented by O. S. Finnie, Director of the Northwest Territories. Among the principal conservation organizations represented were the Boone and Crockett Club, the National Association of Audubon Societies, the American Game Protective Association, the Izaak Walton League, the Permanent Wild Life Protection Fund, the American Bison Society, and the National Parks Association. Governmental bureaus interested in wild-life protection were, respectively, represented by the Director of the National Parks Service, the Director of the Coast and Geodetic Survey, and by various officials of the Forest Service and the Biological Survey. The results of a census of the antelope, which has been made by the Biological Survey through the cooperation of Federal and State officials and individuals throughout the West, were presented to the meeting. In the discussions which followed on the most practical methods for conserving the decreasing numbers of the antelope, it was decided that instead of organizing a new society for the purpose, all existing organizations should join in and assist in securing the objects sought whenever any one of them should take up any phase of antelope conservation. The results of the antelope census referred to indicated that there are approximately 22,000 of these game animals left in sixteen of the Western States.

The following publication of the Bureau was received in December:

"Use of Headlights on Big Lake Reservation, Arkansas, Prohibited,"  
Service and Regulatory Announcement No. 58. December 14.

Among manuscripts submitted for outside publication in December were:

Buchanan, L. L., "Two European Weevils Established in North America,"  
for Entomological News.

-----"On the Systematic Position of the Carabid, Stereocerus haematopus  
Dej," for Canadian Entomologist.

Gabrielson, Ira N., "Consider the Crow," for Country Gentleman.

Jewett, S. G., "Additional Records of Alpine Birds in Oregon," for The  
Condor.

- Lincoln, Frederick C., "Banding Notes on the Migration of the Pintail, Defila acuta tzitzihoa," for The Condor.
- Malloch, J. R., "A new species of Conicera from Porto Rico (Phoridae: Diptera)," for Bulletin of the Brooklyn Entomological Society.
- Oberholser, Harry C., "October and November Birds About Washington," for Bird Lore.
- Preble, E. A., Alexander Wetmore, and W. L. McAtee, "Christmas Bird Census," for Bird Lore.
- Taylor, W. P., "Little Jack," and "Evening Shadows on the Santa Rita," for Nature Magazine.

#### BIOLOGICAL INVESTIGATIONS.

E. A. Goldman and H. H. T. Jackson attended the annual meeting of the American Association for the Advancement of Science, at Cincinnati, Ohio, December 27 to January 2, as representatives of the Survey. The matter of bird banding was discussed by Mr. Goldman at the session of the Wilson Ornithological Club devoted to this subject.

Harry Malleis, who has been for several months in British Honduras and Guatemala collecting living specimens of game birds, especially ocelated turkeys, for introduction on Sapelo Island, Georgia, has returned to the United States. He brought with him 5 turkeys, 4 curassows, and 15 tinamous, all of which, in charge of Mr. Malleis and W. L. McAtee, reached Sapelo Island in safety on December 12. In accordance with previous plans, Mr. Malleis remained at Sapelo Island caring for the birds until early January. He reports that most of them are doing well, although some losses have occurred from different causes. The outcome of the experiment is awaited with interest. A considerable collection of specimens of birds and mammals, together with a number of living agoutis, were also brought back by Mr. Malleis.

#### ALASKA INVESTIGATIONS.

Adolph Murie, who has been stationed at Fairbanks as a field assistant in connection with caribou investigations, has resigned, effective December 10, 1923. He has returned to his home in Minnesota to re-enter school.

Olaus J. Murie, Assistant Biologist and Fur Warden, stationed at Fairbanks, has returned to his home at Moorhead, Minn., for a short vacation before coming to Washington to prepare a report on the result of his three years' investigations of the caribou herds in northern Alaska. Mr. Murie arrived in Washington January 15.

Fur Warden Jack W. Warwick reached his official headquarters at Flat on December 28, having made the trip by dog team from Nome in about twenty-five days. He reports travel very difficult because of the heavy snow. After establishing headquarters he will make a special investigation of conditions regarding land fur animals along the Kuskokwim River.



Fur Warden Allen H. Hardy is putting a stop to the illegal sale of wild game meat at Anchorage. A native from the Eklutna district recently appeared in Anchorage and offered for sale four hind quarters of wild sheep. Warden Hardy was soon on his "trail," seizing two hind quarters and a pair of scales left at a store, but the native escaped and returned home before he could dispose of the remaining two pieces.

The following news item appeared in the Spokane (Wash.) Review of December 29: "Thirty-three Alaska reindeer, the largest consignment of any size ever brought to Spokane, will be placed on sale this morning at Welch's and the Fulton markets. The carcasses are shipped whole, with the hide on, and frozen solid. To preserve the juices and flavor of the meat, it will be cut and sold without thawing." This was part of a shipment made as an experiment by the Bureau of Education, the animals having been slaughtered on St. Lawrence Island.

### ECONOMIC INVESTIGATIONS

J. M. Wilson, a hunter of the Arizona district, who was sent to the Graham Mountains after lions and cow-killing bears, succeeded in killing one bear that had been doing a great deal of damage. It is necessary to kill some bears each year in this range as they apparently run short of their natural food and prey upon livestock.

Joseph Keyes reports that on November 4, twenty hawks were seen feeding upon dead and dying prairie dogs on an area poisoned the previous day, and that at least as many more were also seen flying in the immediate vicinity. These hawks, principally the rough-legged and prairie falcon, follow the poison crews almost as scavengers, and are proving a valuable asset in follow-up and clean-up work. When the prairie dogs have been reduced by a 98 per cent clean-up, it can be safely said that the remainder will be kept under control by these predatory birds.

D. A. Gilchrist, of the Arizona district, reports that 129 cooperators were assisted during November in poisoning 6,706 acres of infested land. More than 4,300 quarts of poisoned bait were used and an average of 95 per cent of the rodents were destroyed.

Dr. G. R. Bach has arranged with the superintendent of the Mount Rainier National Park, Washington, for Hunter Stoner to work inside the park boundaries during the winter. Mountain lions have almost exterminated the deer in this park. Hunter Stoner accounted for one of the most destructive lions.

The Biological Survey Exhibit at the International Livestock Show, held at Portland, Ore., during November, attracted large crowds. An interesting feature was an exhibit of several 7-year-old filbert trees which had been killed by pocket gophers. One of the trees had had every root cut off close to the stump and another had only a small root remaining when it was blown down. This adds another to the list of fruit and nut trees known to be attacked by pocket gophers.

M. E. Musgrave, of the Arizona District, reports that the campaign against coyotes, conducted by Hunter W. A. Knibbe, in the vicinity of Red Rock and Tucson proved a decided success. On a recent trip to Tucson he received enthusiastic reports from farmers that there were no coyotes left on their immediate range.

While crossing an arroya in placing poison baits, Hunter Neeser, of the Idaho district, was seriously injured when his horse fell with him. He will probably be off duty several months.

For the first time since the inauguration of predatory animal control and eradication work, an outbreak of rabies among coyotes, bobcats, and dogs exists in the Colorado District on the southern end of the San Isabel Forest, and adjacent areas. To date approximately \$4,000 worth of livestock have been killed from the bite of rabid predatory animals or dogs, and four persons have been bitten. Brain analysis shows the disease to prevail among bobcats and coyotes. To check its spread a systematic eradication campaign against all predatory animals and dogs is being carried out. Inspector Young has placed Assistant John W. Crook and Hunters Krepps, Wilder, and Spangler in this area, and more hunters will be added if necessary. Hunter W. H. Caywood has been detailed to prevent the spread of the disease eastward to Pueblo.

Carlyle Carr left on January 6 for Massachusetts, where he will aid in conducting two anti-rat campaigns. He will address the State Poultrymen's Association at Worcester on this subject on the 18th and will return to Washington on the 19th.

Progress was made during the month of November in cleaning up orchard mice in five counties in Washington. By far the greatest work was done in the Wenatchee Valley, where 10,200 pounds of poisoned grain was distributed. The total amount of poisoned grain used was as follows: Okanogan County, 10,300 pounds; Chelan County, 24,000 pounds; Grant County, 1,500 pounds; Douglas County, 600 pounds; and Yakima County, 6,000 pounds; a total of 42,400 pounds. This is by far the most intensive campaign that has been put on against orchard mice in this district. Emphasis has been placed on the best time to poison, and the work will be thoroughly done. The careful supervision in mixing the grain by John Finley and A. H. Swain was responsible for the uniformly good results reported by growers.

L. K. Couch reports that for the first time in the history of rodent control in Washington State, pocket gopher districts were successfully organized during November. Four districts were organized in Yakima County, comprising 4,780 acres.

An investigation of red squills as a rat poison is being made in the Eastern rodent control work. Preliminary experiments forecast possible findings of importance.

#### FOOD HABITS RESEARCH

During December, W. L. McAtee made a second trip to Sapelo Island, this time to assist Harry Malleis in the liberation on that island of ocellated turkeys and other birds brought back by the latter from Honduras.



## GAME AND BIRD RESERVATIONS

Wesley D. Parker, in charge of Sullys Hill Game Preserve, North Dakota, states that the animals there are now being fed, but that grouse have not yet begun to come into the preserve for feed. Three crows were seen near the headquarters building on December 29, an unusual sight in that locality at this time of the year.

Fred M. Dille reports an abundance of quail in the region of Niobrara Reservation, Nebraska, but that sharp-tailed grouse and prairie chickens are much scattered.

About 400 elk came down to the Elk Refuge on December 12, and according to the latest report from Warden A. P. Nelson, about 3,000 of these animals are now on the Refuge, where they can still easily procure sufficient forage. It is believed that, from the number still remaining in the near-by foothills, more elk will be on the feeding ground at the Refuge this winter than last. Mr. Nelson advises that few elk were killed by local hunters in that vicinity during the fall due to the fact that there was not enough snow to cause the animals to move down from the Teton State Game Preserve.

More geese have come to the Elk Refuge this autumn than ever before. Before this reservation was made a bird refuge, geese were seldom seen in the springs on the Refuge, but since they have found that they are not molested there several hundred make it their home in the fall, staying in the springs during the night and going out to the grain stubbles during the day. It is not unusual to see 10 or 12 flocks in the air at one time. They fly high on entering and leaving the Refuge, and thus keep out of range of the guns of hunters.

The first week in January the thermometer registered from 20 to 31 degrees below zero each night. Considerable snow has fallen and is piled in large drifts.

B. J. Pacetti, Warden of Mosquito Inlet Bird Refuge, Florida, says that there are more birds around the Inlet this season than for many years. There are a great many herons and egrets.

W. M. McDaniel, Warden at North Platte Bird Refuge, Nebraska, states that the temperature at that place dropped from 52 degrees above zero on December 29 to 25 below on December 30.

Warden Jenkin writes that grouse are numerous, with plenty of feed in sight at Chase Lake Bird Refuge, North Dakota, and that unusually fine winter weather prevails. The lake is frozen but springs near by are flowing.

There are thirteen inches of snow at Conconully Bird Refuge, Washington. The land birds are suffering from cold and will be fed grain by Warden C. M. Conger.

## MIGRATORY-BIRD TREATY AND LACEY ACTS.

The annual meeting of the Advisory Board, Migratory Bird Treaty Act, was held at the Cosmos Club, Washington, D. C., on December 13. Nineteen members were in attendance.

Warden Kelsey states in his weekly report for the period of December 9 to 15: "Warm weather has resulted in a majority of the larger lakes in South Dakota opening up, with the result that open water-holes are swarming with thousands of ducks and geese. No snow, the warm weather, and the best of feeding grounds make ideal conditions. Indications are that half of the southern flight of waterfowl will never pass the southern boundary of South Dakota. . . . Unverified reports from North Dakota and Canada state that waterfowl in considerable numbers still linger there."

In his weekly report for the period of November 25 to December 1, Warden Pacetti states that, "While at West Palm Beach (Nov. 26) I talked with Sheriff Bob Baker and he told me he had just returned from a trip to Bare Beach on the south end of Lake Okechobee and that there were millions of ducks in that section. He told me the entire south end of the lake was black with bluebills, the marshes were alive with all kinds of big ducks, and that he killed 17 pintail ducks in a very short time as they were so thick it appeared as if they would knock him out of his blind."

In the Federal court at Hannibal, Mo., on December 3 fines aggregating \$620, and a jail sentence of 30 days in default of payment of a \$100 fine, were assessed against 13 violators of the Migratory-Bird Treaty Act previously apprehended by Warden Barmeier. The offenses consisted of the illegal transportation of ducks, hunting from motorboat, hunting in close season, and killing grebes and loons.

Seven cases obtained by Warden Merrill and Deputy Warden Scholler were successfully terminated in the Federal court for the Northern District of Illinois on November 21 by a fine of \$25 each. These cases involved the killing of ducks during the close season, possession of ducks in storage during the close season, and the killing of bluebirds.

The State game fund in New York was recently increased \$1,150, representing settlement by civil compromise of several cases prosecuted in that State on evidence obtained by Warden Stadlmeir and Deputy Warden Cushman, involving the sale of partridges which had been shipped to New York from Maine.

A Christmas tree party was held in one of the offices of the Migratory Bird Treaty Act Division on December 24. The tree was attractively decorated and there were appropriate gifts for each member of the Washington office.

The Bureau has learned with regret of the death on October 17, 1923, of James S. White, of Redding, Calif., who at that time was serving as U. S. deputy game warden.



Arthur V. Shaw, 635 1/2 North Eighth St., Quincy, Ill., was appointed U. S. deputy game warden during December.

The following U. S. deputy game wardens tendered their resignations during December:

Richard L. Allston, Box 332, Georgetown, S. C.  
 Victor Sandras, Westwego, La.  
 Henry Stein, 4516 St. Claude Ave., New Orleans, La.  
 James Chadwick, Fernandina, Fla.  
 John B. Rowland, Port Wentworth, Ga.

Appointments of the following U. S. deputy game wardens, no longer officially connected with the respective State game departments, were terminated during December:

Ernest R. Olson, 618 Sixth St., Willmar, Minn.  
 Jack L. Rollins, 611 So. Manhattan Ave., Manhattan, Kans.  
 Arlie B. Metcalf, Maumee, Chio.

Migratory Bird Treaty Act Cases Terminated - Reports Received During December.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Andersen***	1	Illinois	Killing ducks in close season	\$25 and costs
Andersen***	1	Iowa	Killing ducks in close season	\$20 and costs
Andersen***	1	"	Possessing ducks in close season	\$50 and costs
Barber** and Lapham**	1	Indiana	Hunting ducks in close season	\$10 and costs
Barmeier	1	Illinois	Hunting ducks in close season	\$1 and costs of \$14.96
"	1	Missouri	Hunting coots from motorboat	\$100
"	1	"	Illegal transportation of ducks	\$100 and in default committed to jail for 30 days.
"	1	"	Killing ducks in close season	\$100
"	1	"	Killing ducks in close season	\$40
"	3	"	Killing ducks in close season	\$50 each
"	3	"	Killing ducks in close season	\$25 each
"	2	"	Killing grebes	\$25 each
"	1	"	Killing a loon	\$5
Chamberlin*	1	Indiana	Killing ducks in close season	\$10 and costs
Charlton and Harrison**	1	W. Virginia	Hunting ducks from motorboat; shooting at grebes	\$25
Corbin**, Davis**, and Neal**	1	Indiana	Killing ducks in close season	\$1 and costs
Farnham	1	D. of C.	Selling ducks	\$25
Fidler*	1	Illinois	Killing ducks in close season	\$12
Fleming*, Randall**, and Barber**	4	Indiana	Hunting ducks in close season	\$10 each and costs

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Fleming*, Baldwin**, and Randall**	5	Indiana	Hunting ducks in close season	\$10 each and costs
Fleming*, Randall**, and Walker**	4	"	Hunting ducks in close season	\$10 each and costs
Linebaugh	2	Tennessee	Selling geese	\$30.93 each
Merrill and Scholler*	1	Indiana	Killing ducks in close season	\$10 and costs
" " " "	2	Illinois	Killing bluebirds	\$25 each
" " " "	3	"	Killing ducks in close season	\$25 each
" " " "	2	"	Possessing ducks in storage in close season	\$25 each
Merrill	1	"	Possessing a red-headed wood-pecker	\$25
Perry	1	Mississippi	Killing wood ducks	\$25
Ransom and R. C. Steele	1	Washington	Selling aigrettes	\$100
Shaver	1	Minnesota	Hunting ducks in close season	\$50
Shaver and Gervais**	1	"	Hunting ducks in close season	\$50
Shaver and Bridges**	1	"	Hunting ducks in close season	\$10
Shaver and Fidler*	1	Illinois	Hunting ducks in close season	\$15 and costs
" " " "	1	"	Hunting ducks in close season	\$10
" " " "	1	"	Hunting ducks in close season	\$25
Shupee****	1	Texas	Selling ducks	1 hour with marshal
Steele, R. C.	3	Oregon	Hunting ducks after sunset	\$25 each
Tonkin	2	"	Killing ducks in close season	\$20 each
Visart	5	Texas	Killing yellowlegs in close season	\$10 each
Walker** and Randall**	2	Indiana	Killing ducks in close season	\$10 and costs

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\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Former U. S. Deputy Game Warden

\*\*\*\* Former U. S. Game Warden

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	4	Missouri	Killing ducks in close season
"	1	"	Killing a loon
Birsch	7	N. Carolina	Hunting sora at night
Farnham and Creighton*	2	Virginia	Hunting ducks after sunset
Farnham, Hilliard, and Pierce*	1	New Jersey	Hunting ducks after sunset
Farnham	1	Dist. of Col.	Selling ducks
Hall**and Pierce*	2	New Jersey	Hunting ducks after sunset
Hoffman	1	Louisiana	Selling ducks
Kelsey	22	So. Dakota	Hunting ducks after sunset
Riddick and Sammons**	6	Texas	Hunting ducks in close season
Riddick, LeBlanc**, and Williams**	3	"	Hunting after sunset
Shaver	1	Wisconsin	Selling ducks
Shaver and Drum**	1	Minnesota	Possessing ducks in storage in close season
Smith	2	Maine	Hunting ducks from motorboat
"	3	"	Killing sanderlings and semipalmated plover
Steele, O.D.	2	Iowa	Hunting ducks after sunset
Steele, R. C.	3	Oregon	Hunting ducks after sunset
" "	1	Washington	Hunting ducks after sunset
Steele, R. C. and Marco**	4	"	Hunting ducks after sunset
Whitehead and J.B. Rowland*	2	S. Carolina	Possessing parts of freshly killed wood ducks

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\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden





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Washington, D. C., February 14, 1924

No. 2

## GENERAL NOTES

Birds liberated late last fall on Sapelo Island, Georgia, which were secured by Harry Malleis during the Biological Survey cooperative expedition to Guatemala, are in perfect health and appear to be thriving, according to H. E. Coffin, who owns the island and financed the expedition. The birds placed on the island include ocellated turkeys, curassows, and tinamous, and also chachalaccas from northeastern Mexico. Mr. Coffin believes that the acclimatizing experiment will prove successful, and is supplying funds to enable Mr. Malleis to return to Guatemala in the near future to obtain a larger supply of the ocellated turkeys and other birds in order to insure a thoroughgoing test. The results to date are exceedingly promising, and the final outcome, if successful, will add a number of beautiful and interesting birds to our domestic fowls and one or more species to the wild-game supply of the Gulf coast region.

Due to dead ducks being found in considerable numbers at the head of Chesapeake Bay, particularly near Spesutie Island, Md., during December and January, an investigation was conducted by E. R. Kalmbach, of the Division of Food Habits Research, and Talbott Denmead, of the Migratory Bird Division, the results of which proved that the ducks had eaten phosphorus and died from the poison. The birds obtained the phosphorus while feeding in a wild-celery bed of small area, where smoke projectiles or grenades containing that chemical had been dropped during experimental firings from the Aberdeen Proving Grounds. It is known that at least 500 were thus poisoned, and this number may have been greatly exceeded. On reporting the results of the investigation to the War Department, which has supervision over the Aberdeen Proving Grounds, the officials promptly adopted measures to prevent a recurrence of the trouble. These measures are to employ, so far as possible, devices to frighten the birds from the wild-celery beds, where particles of phosphorus may still remain undissipated, and to limit the firing of similar projectiles to deeper water or land areas. It is possible that some further deaths may result from poisoning in the limited area where the projectiles were dropped, but it is hoped that through the employment of the frightening devices the birds will be kept away from the area a sufficient time to permit the phosphorus to become dissipated.

Olaus J. Murie, who has been in Alaska for the past three years studying the distribution and habits of the caribou, with a view to securing young of the larger woodland caribou of that region to use in building up the size of the reindeer, is in Washington working on his field notes and getting information necessary for the continuance of his work. He will soon return to Alaska to have charge of the biological section of a joint expedition to the migratory wild-fowl breeding grounds south of the mouth of the Yukon, which will be financed by Herbert W. Brandt, of Cleveland, and H. B. Conover, of Chicago, both of whom will personally take part in the expedition. This will

afford an excellent opportunity not only of studying a great number of breeding migratory wild fowl in their summer homes, but also at the same time of banding a large number of ducks and geese on this great breeding ground. If such birds are later taken by sportsmen in different parts of Canada and the United States more will then be known of the routes of travel and the wintering grounds of these birds. Such information from all of the great northern breeding grounds will be of the greatest usefulness in connection with efforts to conserve these valuable game birds. The party will proceed by the Government Railroad to Nenana, on the Tanana River, and thence by dog sled eight hundred miles to the mouth of the Youkon.

Arrangements for a cooperative investigation of the quail in southern Georgia have been brought to a conclusion, and Herbert L. Stoddard, of Milwaukee, has been appointed to take charge of the work. He was recently in Washington for consultation and has gone for a preliminary visit to the field of operations in Georgia, where he will be stationed during the next three years for the purpose of carrying on field investigations. The object of the investigations will be to study the life history of the bobwhite and its relation to its environment, and to develop a practical plan whereby the numbers of these beautiful game birds may be maintained in definitely increased numbers.

The Committee on THE SURVEY is in a receptive mood for suggestions for the betterment of the Bureau's house organ. The membership for the year 1924 is as follows: Dr. W. B. Bell, chairman, representing Economic Investigations; W. C. Henderson, representing the Bureau as a whole; Edward A. Preble, Biological Investigations; W. F. Bancroft, Alaska Investigations; E. R. Kalmbach, Food Habits Research; Smith Riley, Game and Bird Reservations; Dr. T. S. Palmer, Importations; W. Roy Dillon, Migratory Bird Treaty and Lacey Acts; W. H. Cheesman, Editor.

From Dr. Walter P. Taylor, a prime mover in the establishment of THE SURVEY, comes a triple-headed suggestion, the substance of which is as follows: (1) It would be well if field men could be induced to send in more notes on their activities. For example, there are several people who are long on activity but short on personal publicity, about whom we read little. (2) Additional notes with regard to scientific, economic, or human aspects of the work of the Bureau would be welcome. (3) If the organ were made a little more personal, it would be even more influential and interesting than it is now. "The Bureau house organ has surely filled a large place during the four years it has been in commission."

Among manuscripts submitted for outside publication in January were:

Ashbrook, Frank G., "Fur Farming," for The Farm Journal.

-----"More and Better Furs," for the Fur Trade Review.

Bailey, Vernon, "How Beavers Build Their Houses," for Nature Magazine.

-----"How to Become a Naturalist," for Nature Magazine.



- Day; Albert M. (collaborating with S. H. Dadisman), "Nature Study Text Book for Elementary Schools in the Western States," for private publication.
- Kellogg, Remington, "The Tertiary Pelagic Vertebrates of Eastern North America," for Bulletin of the Geological Society of America.
- McAtee, W. L., "Trilisa on the Market," for Torreya.
- "Birds as Factors in the Control of the Fall Webworm" (a review), for The Auk.
- "Birds in Relation to Poison Oak," for The Auk.
- Malloch, J. R., "The Generic Position of the dipteran Trichopticus curvipes Stein," for Canadian Entomologist.
- "A New Species of Canacea from the United States (Diptera: Ephydriidae)," for Proceedings Entomological Society of Washington.
- "The North American Species of the Genus Hoplogaster (Diptera: Anthomyiidae)," for Entomological News.
- Murie, O. J., "Nesting Records of the Wandering Tattler and Surf Bird in Alaska," for The Auk.
- Oberholser, H. C., "Birds," and "Ornithology," for Cyclopedia of Agriculture, published by John A. Bellows, Chicago.
- "Uncle Sam as a Protector of Wild Life," for Successful Farming.

#### BIOLOGICAL INVESTIGATIONS

Dr. H. C. Oberholser represented the Bureau at the annual meeting of the Northeastern Bird Banding Association (formerly the New England Bird Banding Association), January 16 and 17. Addresses on the importance to conservation of the bird banding activities of the Bureau and on methods of operation were given. Interest in the work is very manifest in this region, and the prospects are excellent for continued cooperation.

T. H. Scheffer reports that weather conditions during December and early January were unfavorable for the satisfactory prosecution of field investigations. One trip, to the Lind district, was made about the middle of December to investigate small rodents. Of 112 mice taken on the nights of December 11 and 12, the following were included: 94 Peromyscus, 11 Reithrodontomys, 5 Perognathus, and 2 Mus. Mr. Scheffer also inspected the progress of experiments being carried on at Ritzville to determine the hibernating habits of Perognathus.

During January several bird banding cooperators called at the Washington office. Dr. John B. May, of Cohasset, Mass., spent an entire day here while en route to take charge of S. P. Baldwin's station at Thomasville, Ga. Herbert L. Stoddard, of Milwaukee, Wis., who is also the treasurer of the Inland Bird Banding Association, was here for about two weeks, engaged with the details of quail investigations. Bird banding is expected to take an important place in this study. Other cooperators calling were E. F. Chilcott, of the U. S. Field Station, Woodward, Okla.; Robie Tufts, who

is operating at Wolfville, Nova Scotia; and Mrs. Lillian D. Morey, whose interesting station at Chevy Chase, Md., is known to many cooperators passing through Washington.

Prof. V. E. Shelford, of Urbana, Ill., was a visitor to the office on several occasions in the latter part of January, engaged in conferences with several members of the staff in regard to ecological conditions in various parts of North America. In a work in which he is interested, conditions in different sections will be detailed for the benefit of prospective investigators.

Dr. Alexander Wetmore lectured before the Audubon Society of the District of Columbia in the auditorium of the National Museum on January 23, on "The Birds of Laysan Island," illustrating his talk with the motion pictures taken on the island by Donald R. Dickey, of California, who accompanied the expedition to this famous bird reservation. He gave the same talk at the Cosmos Club on February 7, in the lecture course of the George Washington University. The Biological Survey and the Department were well represented in the audiences on both occasions.

#### ALASKA INVESTIGATIONS

The collector of customs at Nome reports 195,709 pounds of reindeer meat shipped from that port to the States during 1923.

Jesse Nevill, of Ketchikan, has been appointed a fur warden for southeastern Alaska, to assist Chief Fur Warden Walker in patrolling that section.

Walter C. Denny has been appointed a fur warden with headquarters at Fairbanks. He takes the place of Olaus J. Murie, who heretofore has acted as fur warden in connection with his duties in caribou investigations.

Fur Warden Hardy was able to secure 60 rabbits (varying hares) from the Anchorage district, for restocking islands in southeastern Alaska. They were placed on McFarland, Village, and Cap Islands.

Statistics showing the numbers, kinds, and value of skins of land fur-bearing animals shipped out of Alaska, as reported to the Bureau, covering a period from December 1, 1922, to November 30, 1923, have been completed. The number of skins totaled 397,286, with a value of \$1,794,875. As usual, muskrats furnish the largest number, 319,611, valued at \$367,552.

#### ECONOMIC INVESTIGATIONS

Members of this Division and his many friends throughout the Bureau were glad to welcome Doctor Fisher back to his office on February 4, and to know that he is now recovering from the effects of a painful carbuncle on the neck.

Dr. W. B. Bell attended the annual meetings of the American National Livestock Association at Omaha, Nebr., January 15 to 17, the Idaho Wool Growers at Pocatello, Idaho, on the 21st, and the National Wool Growers Association at



Salt Lake City, Utah, January 22 to 24. Resolutions were adopted at all these meetings strongly endorsing the work of the Bureau and urging an increase in its scope. On his return trip Dr. Bell made brief stops at Denver and at Mahhatten, Kans., to confer with Bureau representatives and cooperating State officials; and at St. Louis, where he made inquiries regarding fur market conditions and strychnine production.

The city of Portland has appropriated money for paying half the salary of a Biological Survey representative to be stationed in that city to handle the rat situation, and for buying poison supplies. H. S. Speer, who did the rat work in Portland last year, has been assigned to this work.

Frank G. Ashbrook went to the Experimental Fur Farm at Saratoga Springs, N. Y., on January 29.

During two nights in December two cotton rats cut down over 1,000 citrus seedlings in a nursery north of Phoenix, Ariz. About two quarts of poison, worth 12 cents per quart, were placed in the nursery, and the next day the two rats were found dead and no further damage occurred. The owner stated that the 1,000 trees killed were worth \$1,000, that the 200,000 trees remaining will be sold for \$1.50 each next year, and that he values the assistance of the Bureau at at least \$1,000.

Inspector Young, of the Colorado District, reports that on December 12 W. J. Nearing trapped an old female wolf north of Fruita, near the Big Salt Wash. The hunter had been on the trail of this wolf and her mate since August, 1921. For three years he has succeeded in taking the young of this female, which totaled 21 pups. On examining the wolf after she was trapped, it was found she contained seven unborn pups. This wolf had preyed heavily on deer along the Book Cliff Mountains and on the cattle ranging close to these mountains, and had made many kills of sheep during spring drives.

R. S. Zimmerman gave a 35-minute radio talk on "The Control of Animal Pests in Cooperation with the Bureau of Biological Survey" on December 12, in cooperation with the Department of Engineering at the North Dakota Agricultural College.

John Frederick, while poisoning coyotes on a range south and west of Winslow, Ariz., discovered that a mountain lion had killed a grown horse and had eaten part of the neck and shoulder. The hunter there-upon studded the carcass with poison tablets in pork fat, and was rewarded by finding the lion about 50 yards away. Many said the mountain lion was the largest they had ever seen.

Competitive rabbit hunts on a broad scale were staged during December in the northeastern part of Colorado by Joseph Keyes, sponsored by the two leading Denver newspapers and the commercial clubs of the various sections. About 20,000 rabbits were secured and sent free by the cooperating railroads and newspapers to needy families in Denver.

Dr. G. R. Bach reports that in connection with a coyote poisoning campaign on the Yakima Indian Reservation, Washington, during January and February, livestock owners who have grazing permits on the reservation offered to assist Hunter Land by furnishing and killing old horses for station material.

On request for assistance through County Agent W. H. Sawhill, of Pueblo County, Colorado, W. H. Caywood was detailed to the Butler Pasture country, south of Pueblo, to eradicate wolves, which had been reported by stockmen as causing severe losses among cattle. After working but three weeks, Hunter Caywood succeeded in poisoning a female wolf which truly was an old timer. A toe missing on each <sup>front</sup> foot gave her the appearance of being a natural three-toed animal. Mr. Caywood's success is all the more gratifying, as for years this wolf had evaded capture by many private hunters and trappers.

Assistants in the Washington district have been successful in destroying Columbian ground squirrels with calcium cyanide. As a result, about 140,000 pounds of the chemical have been ordered for use next season.

In November and December Arthur Meili, a hunter of the South Dakota District, who was detailed by Inspector Knowles to work on the Niobrara Game Reservation, Nebraska, took 1 bobcat and 10 coyotes. This is the first predatory animal work that has been done in Nebraska by this Bureau.

Recent experiments in the East indicate that the method of controlling moles by placing teaspoonful quantities of concentrated lye into their runways at 25 and 50-foot intervals is at least partially successful. This method is so simple and inexpensive as compared with trapping that it seems worthy of further investigation. We would like to hear from anyone having had experience with this method.

During December a campaign against magpies was conducted in Nevada in cooperation with the Washoe County Game Warden. A practical cleanup of these birds in the Truckee River district is reported. A similar campaign has been planned for Lyon County.

Before our work in pocket gopher control in Arizona was started several years ago, citrus growers near Phoenix each lost from \$500 to \$10,000 worth of trees a year. This year the growers cooperated with the Bureau in cleaning their holdings of pocket gophers and during 1923 only about a dozen trees were damaged.

Mr. Holman reports that during the early part of the year 1923, at two ranches in the southern part of Rush Valley a coyote during one night bit several horses, cattle, and pigs, as well as a goose and a dog. The ranchers killed the coyote about daylight the following morning, and after finding that a number of animals had been bitten, treated the wounds with a strong lysol preparation and then poured iodine in them. This treatment was repeated again in a short time. The animals that were treated in this way did not develop rabies, but a number not known to have been bitten developed the disease and died. The Bureau of Animal Industry advises that the use of the lysol wash was probably the essential feature of the treatment.



The war against gray wolves in Arizona has reached the point where there are, according to latest reports from stockmen, only two small areas now infested with these animals. One of these is the San Carlos and White River Apache Indian Reservations, where as nearly as can be determined there are four wolves; and the other is the country south of Saligman, where there is thought to be one wolf. Three hunters are now on the Indian Reservations, and one hunter is working south of Seligman.

Wolves are fast disappearing in Idaho as a result of the extensive poisoning campaigns. No serious losses from them have been reported for some time.

Hunters in Michigan report seeing many large flocks of grouse in all parts of the Upper Peninsula. This would indicate that the work of destroying foxes and other predacious animals and birds has had a good effect. An extensive poisoning campaign during the winter, reducing the number of animals before the breeding season, will tend toward an increase in the numbers of these game birds.

As a result of continued activities on coyote control in the North Park Country, Colorado, a greatly increased number of sage hens was noted during the early summer. On one inspection trip flocks ranging in numbers from twelve to sixty were seen. Three years ago, one might ride nearly all day without seeing a single sage hen, but throughout the summer of 1923 they were noted in abundance in practically all sections of North Park. Quail are also on the increase in western Colorado.

Field men report that game birds have increased over all the State of South Dakota during the year. The season was very favorable for the native birds, and all of the grouse family, the imported pheasants, and the quail are nearly twice as numerous as at the close of 1922. The bobwhite quail have increased in such numbers as to be plentiful along the timbered streams about the Black Hills and also in the Belle Fourche Irrigation Project and along all of the course of the White River.

Biological Survey operations in the Wichita National Forest and Game Preserve, Oklahoma, have left that wild life sanctuary practically free of coyotes.

C. R. Landon, of the Texas district, reports that responsible stockmen have declared that freedom from predatory animal depredations as a result of our work has increased land values in many counties from \$2 to \$5 per acre. The area of the counties affected includes more than 14,000,000 acres.

During the calendar year 1923 the Bureau operated in each of the fourteen counties of Arizona, and cooperators who assisted state that through this work they have increased their production by over \$400,000. The cost of this work to the State and Federal Governments was \$15,000 each.

A motion picture entitled, "The Modern Pied Piper," has been completed and has been favorably received by several selected audiences. The story is adapted from Robert Browning's well-known poem, "The Pied Piper of Hamelin," and is designed to stimulate interest in rat control. The picture follows closely the original story up to the point of entrance of the pied piper. The methods of controlling rats employed by the "modern pied piper" (Uncle Sam) are those advocated by the Biological Survey. The results obtained, however, are as effective as those of the piper of Hamelin and more greatly appreciated. Copies of this film will be available for public use by responsible persons upon application to the Office of Motion Pictures, U. S. Department of Agriculture, Washington, D. C.

Joseph Keyes, biological assistant, in charge of rodent control work in Colorado, was transferred on January 21 to take charge of the rodent work in California. L. L. Laythe, formerly in charge of rodent work in California, assumed charge of the Colorado district, effective the same date.

A delegation of colored extension workers from Alabama, including the State leader of colored extension agents and the negro field agent of the Office of Cooperative Extension, visited offices of the Bureau on January 24, being particularly interested in obtaining information regarding anti-rat campaigns.

Miss Helena Snider was appointed clerk in the office of L. J. Goldman, Gooding, Idaho, January 17.

A. L. Bridenstein was appointed junior biologist on December 9 to assist L. C. Whitehead in rodent control work in Texas.

Miss Lillian Borton was appointed clerk to A. M. Day in the Wyoming district on January 2.

#### FOOD HABITS RESEARCH

The number of bird stomachs received and catalogued during the calendar year 1923 was 2,697. This is a lower total than in some recent years, but three considerable collections were received that have not yet been catalogued because of lack of data. The number of bird stomachs examined and the contents analyzed was 2,154. Besides these, 252 bird pellets were examined, as well as the stomachs of 877 toads, 69 mammals, and a few other vertebrates.

Charles C. Sperry spent most of January in Louisiana investigating the reported deaths of large numbers of wild ducks, and making a survey of duck food conditions in the Mississippi Delta region.

E. R. Kalmbach went to Indiana early in January to give advice for control measures in the vicinity of a large crow roost. He is now in Colorado, engaged in a study of damage by magpies, and in seeking the most effective methods of combating these birds.



## GAME AND BIRD RESERVATIONS

Mr. Riley returned on February 4 from a trip of several months' duration to reservations in the West, including the National Bison Range, Montana; Elk Refuge, Wyoming; Niobrara Reservation, Nebraska; Wind Cave Game Preserve, South Dakota; and Sullys Hill Game Preserve, North Dakota. He attended the meeting of the State Sportsmens Association, at Helena, Mont., December 17 and 18, and also the meeting of the Minnesota Sportsmens Association at St. Paul, Minn., on January 31.

The herds on the Montana National Bison Range have increased to such numbers that the reservation is becoming overstocked and the effect of over-grazing is apparent. It has become necessary, therefore, to dispose of a few of these animals in order to prevent permanent injury to the range. The meat was disposed of to dealers. Arrangements are being made to purchase hay to feed the remainder of the herd in the spring in order to enable the native grasses to recuperate in the early growing season. Some surplus elk and buffalo at Wind Cave Preserve also have been killed, in order to prevent overstocking at that reservation.

Bryan Nowlin has resigned as assistant warden at the Bison Range to take possession of a farm in the Moiese Valley. We regret to lose the services of Mr. Nowlin, and he has our best wishes for his future success.

There were 9,390 visitors at the Sullys Hill Game Preserve, North Dakota, during the calendar year 1923. A number of improvements have been completed at this preserve, including a drive about half a mile in length, from the picnic grounds to the main road, a walk around Sweetwater Lake, and a chute and squeeze for use in connection with a corral for capturing animals for transportation for restocking purposes.

The latest reports from the Elk Refuge indicate that feeding of the elk would not be necessary before January 30. At that time, about 4,000 elk were pasturing at the Refuge and adjoining ranches.

A bull elk, a large buffalo bull, and two deer died at the Niobrara Reservation during January. The deer, a doe, was sent to Niobrara Reservation last spring from the Wichita Game Preserve, Oklahoma, and had one fawn born last summer. It is still living and is the only deer now at Niobrara.

William E. Brooks, warden of Dungeness Spit Reservation, Washington, states that the weather there has been warm for a long period and that many ducks and geese have been moving northward. This is probably the earliest date that these birds have been seen going north in that locality.

Paul Kroegel, warden of the Pelican Island Reservation, Florida, reports an unusual amount of rain in that section.

A plan to attract Canada geese to the Sullys Hill Game Preserve by means of live decoys is bearing fruit through the fact that the Secretary of the North Dakota State Game Association has presented the Biological Survey

with a gander honker to pair with the hen goose on the reservation. This gander and his partner were successful in calling several large bunches of Canada geese into Sweetwater Lake last fall at the time of migration. No feeding was done at that time, but the birds remained several days around the lake. Arrangements have been made to put out feed for the geese attracted by the live decoys to the region during the spring migration. The small lake is in close proximity to Devil's Lake, where such flocks of geese as are attracted to the locality may find satisfactory water area upon which to rest during the night.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS.

During the month of January, Mr. Lawyer was engaged in taking a census of the swans on Back Bay, Virginia; and on Currituck Sound and Mattamuskeet Lake, North Carolina. He also attended the annual meeting of the Virginia Game and Game Fish Protective Association, at Richmond, January 21.

Talbott Denmead, deputy chief warden, was in New York City, January 15, where he investigated sales of whooping cranes.

Warden Kelsey, of Watertown, S. Dak., in his report for January 6 states "On Sunday, January 6, 1924, at about 9 A.M., with the temperature far below zero, I saw a flock of about 12 Canada geese winging southward. Where these birds got their last drink, and where they expected to get their next one, is beyond me."

Six members of the Bureau--Messrs. Lawyer, Denmead, Dillon, Earnshaw, Wetmore, and Bloxson--attended the midwinter banquet of the Maryland State Game and Fish Protective Association, at the Caswell Hotel, Baltimore, on the evening of February 6. The speakers were Seth E. Gordon, Executive Secretary of the Pennsylvania Board of Game Commissioners, Mr. Lawyer, and E. Lee Le Compte, State Game Warden of Maryland. Mr. Lawyer spoke on the enforcement of Federal game laws. More than 250 members of the association and their friends were present.

The Federal season for hunting migratory birds is now closed throughout the United States. In those States where the season continued to January 31, migratory birds lawfully taken could be possessed up to and including February 10. Waterfowl, jacksnipe, rails, coots, gallinules, and mourning doves found in possession after the expiration of such period are subject to seizure and the person possessing them to Federal prosecution.

Deputy Wardens Earnshaw and Trenis obtained cases against four dealers in game in the District of Columbia for purchasing wild ducks on January 10. Two paid fines of \$10 each, one \$5, and the other \$125.

For hunting wild ducks after sunset three violators were fined \$50 each in Minnesota, while two in Missouri were fined \$65 each for hunting coots from a motorboat. The first three cases were secured by Warden Shaver and the two latter by Warden Barmeier.



The practice of hunting and killing migratory waterfowl from airplanes continues to some extent, but wherever violations of this kind are reported every effort is being made to apprehend and convict the person responsible for the illegal act. Sixteen cases involving hunting of migratory waterfowl from airplanes have been obtained since the Migratory Bird Treaty Act Regulations became effective. The most recent one is a case sent in by Warden Perry, the evidence being obtained against an aviator who killed a number of wild geese over the Mississippi River.

The following appointments to the position of U. S. deputy game warden were made during January:

Frank S. Clark, 710 Medary St., Austin, Minn.  
Geo. A. Morris, 712 W. Fourth St., Faribault, Minn.  
Joe Lynn, R. D. #3, Nashville, Tenn.  
Daniel T. Wright, Edmonds Bldg., Washington, D. C.  
William E. McCarley, Beardman, Fla.  
Guy Amsler, 1520 West Eighth St., Little Rock, Ark.  
Hugo W. Speckles, Cleveland, Texas.  
Charles O. Baughman, Nashville, Ark.

The following tendered their resignations as U. S. deputy game warden during the month:

Walter E. Martin, c/o Home Furniture Co., Rock Springs, Wyo.  
(Formerly Central City, Nebr.)  
John J. Moon, Kemmerer, Wyo.  
Paul L. Banks, R. D. No. 2, Tchula, Miss.  
William H. Seaman, 1030 County St., Fall River, Mass.

Appointments of the following U. S. deputy game wardens were terminated during the month:

Leo Stuhr, Lincoln, Nebr.  
William S. Maple, 268-5/6 Coronado St., Los Angeles, Calif.  
Harry C. Anderson, 210 E. Second St., Washington, D. C.  
Arthur J. Fisher, 1461 E. 49th St., Los Angeles, Calif.  
Rex L. Hubbard, Northern Pueblos, Espanola, N. Mex.  
Robert Nolan, Beaumont, Tex. (Formerly Galveston, Tex.)



## Migratory Bird Treaty Act Cases Terminated - Reports Received during January.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Andersen*	1	Iowa	Possessing ducks in close season	\$25 and costs
Barmeier and Heller*	2	Missouri	Hunting coots from motorboat	\$65 each
Bloxsom and Trenis*	2	Virginia	Killing ducks in close season	\$15 each
Earnshaw* and Trenis*	1	Dist. Columbia	Purchasing ducks	\$125
" " "	1	"	Purchasing ducks	\$5
" " "	2	"	Purchasing ducks	\$10 each
Farnham and Creighton*	2	Virginia	Hunting ducks after sunset	\$10 each
Holmes	4	Nebraska	Killing ducks in close season	\$5 each
Lindgren***	1	Illinois	Hunting ducks after sunset	\$10
Perry	1	Mississippi	Possessing a swan	\$10
Perry and Banks*	2	"	Killing wood ducks	\$10 each
Pierce*	1	New Jersey	Hunting ducks after sunset	\$10
Pierce * and Hilliard	1	"	Hunting ducks after sunset	\$1
" " "	1	"	Hunting ducks after sunset	\$2
" " "	1	"	Hunting ducks after sunset	\$5
Pierce*, Hall**, and Hilliard	1	"	Hunting ducks after sunset	\$25
Ransom	2	Idaho	Killing wood ducks	\$15 each
"	1	"	Killing wood ducks	\$25
"	1	"	Killing a heron	\$1
Riddick	1	Texas	Hunting ducks after sunset	\$10
"	1	"	Hunting ducks after sunset	\$20
Shaver	1	Minnesota	Hunting ducks after sunset	\$20
"	1	"	Hunting ducks after sunset	\$50
Shaver and Drum**	1	"	Possessing ducks in cold storage in close season	\$10
Shaver and Daye*	1	"	Hunting ducks after sunset	\$50
Shaver and Lawton	1	"	Hunting ducks after sunset	\$50
Smith	2	New Hampshire	Hunting yellowlegs after sunset	\$25 each
Taylor*	1	New Jersey	Possessing a wood duck	\$1
Whitehead	1	Georgia	Killing a wood duck	\$1
"	2	Florida	Killing grebes	\$5 each
"	3	"	Killing herons	\$5 each
"	1	"	Killing herons	\$15
"	1	"	Killing bobolinks in close season	\$5

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

\*\*\* Former U. S. Game Warden

## CASES REPORTED FOR PROSECUTION

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	1	Missouri	Possessing a meadowlark
Barmeier and Heller*	2	"	Hunting coot from powerboat
Birsch and Walker**	1	Virginia	Exceeding daily bag limit on sora
Bischof*	2	Missouri	Hunting ducks in close season
Bloxsom, Stevens**, and Nottingham**	1	Virginia	Hunting ducks from motorboat
Bloxsom, Stevens**, and Nottingham**	1	"	Trapping ducks
Charlton and Metcalf*	1	Ohio	Hunting ducks after sunset
Clark**	1	Louisiana	Selling ducks
Earnshaw* and Trenis*	4	Dist.Col.	Purchasing ducks
Hampe** and Spreckles***	1	Texas	Killing a dove in close season
Hoffman	2	Alabama	Killing doves in close season
Lawyer	7	No.Carolina	Hunting geese at night
Mitchell** and Kleist**	1	Wisconsin	Hunting ducks prior to half an hour before sunrise
Perry	1	Mississippi	Killing geese from an airplane
Riddick	5	Texas	Hunting ducks after sunset
Riddick and Hampe**	1	"	Possessing a meadowlark
" "	1	"	Killing doves in close season
Riddick and Williams**	1	"	Hunting ducks after sunset
" "	1	"	Killing a heron
" "	1	"	Killing a bittern
" "	1	"	Killing meadowlarks
Shaver	1	Illinois	Possessing ducks in close season
"	4	Minnesota	Possessing ducks in cold storage in close season
Smith, Standlmeire and Tribou	1	Massachusetts	Killing ducks at night
Steele, O. D. and Holmes	2	Iowa	Hunting ducks from motorboat
Steele, R. C.	1	California	Shooting at a goose after sunset
Visart	1	Arkansas	Killing ducks in close season
Williams**	2	Texas	Hunting ducks after sunset
Yanch*	1	"	Killing coot in close season

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

\*\*\* Deputy sheriff





# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE

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No. 3

## GENERAL NOTES.

In disposing of surplus buffalo on the Bison Range, in Montana, to lessen the danger of overstocking the refuge and the consequent overgrazing threatening the welfare of the herd, buffalo carcasses have been shipped to markets in some of the western cities, and one experimental long-distance shipment was sent as far as the National Capital. The Secretary of Agriculture received this and distributed parts of it to the President, to a few Senators and Congressmen, and to the National Press Club of Washington. As it will be necessary to eliminate the surplus animals from year to year, it is desired to acquaint the city markets with a meat which is not at present a generally available food product. Doctor Nelson, with the aid of Doctor Stanley and her assistants in the Bureau of Home Economics, had a luncheon served in the laboratory of that bureau on March 11, at which buffalo meat was enjoyed by the Secretary, the Assistant Secretary, Director of Scientific Research, Chiefs of Bureaus, and others, about 30 in all. General expressions of opinion as to the qualities and flavor of the meat were most laudatory. A report from the National Press Club intimates that a second helping would be much relished by the scribes gathered here from all sections of the country.

The following publication of the Bureau was received in February:

"Food and Economic Relations of North American Grebes," by Alexander Wetmore, Division of Biological Investigations. (Contribution from the Division of Food Habits Research.) Pp. 23, figs. 4, issued January, 1924 (received February 9).

Among manuscripts submitted for outside publication in February were:

Bailey, Vernon. "The Otter," for Nature Magazine.

McAtee, W. L. "Hullen Rosettes as Winter Shelters for Insects," for Journal of Economic Entomology.

----- "Notes on a Collection of Erythroneura and Hymetta (Eupterigidae) Chiefly from Illinois, with Descriptions of New Forms," for Bulletin of Illinois State Natural History Survey.

----- "Notes on Distribution and Food Plants of the Grape Leafhoppers and Allies, with Description of a Few New Forms (Homoptera: Eupterygidae)," for Journal of Economic Entomology.

----- "Notes on the Genus Dikraneura in the United States (Homoptera: Eupterygidae)," for Proceedings Entomological Society of Washington.

Malloch, J. R. "Some Indian Species of the Dipterous Genus Atherigona Rondani," for Records of the Indian Museum.

Oberholser, Harry C. "December and January Birds at Washington, D. C.," for Bird-Lore.

----- "The Migration of North American Birds; Ruby-throated, Black-chinned, and Calliope Hummingbirds," for Bird-Lore.

Palmer, T. S. "The Condition of Game During the Last Fifty Years," for American Field.

Miss Elizabeth M. Olmsted was recently transferred from the Economic Investigations Division to the Administrative office to assist with the correspondence of the Chief of Bureau and with other work in the office.

Louis Klein, who has been with the Bureau since May 1, 1913, with the exception of one year, resigned February 19, 1924, to accept a position in commercial life. Mr. Klein was in charge of the Mail and File Room, where he was instrumental in building up an efficient filing system. His place has been filled by the assignment of Hyman Liebman, who has been with the Bureau since August 23, 1920, and has been assisting for some months in file work. Raymond A. Mueller has been appointed assistant in the mail and file room.

P. S. McCubbin, who has been on leave since December 7, 1923, returned to duty on March 1.

#### BIOLOGICAL INVESTIGATIONS.

Vernon Bailey left Washington on March 1 for New Mexico, where he will cooperate with the National Geographic Society Expedition in an exploration of the great cave recently discovered near Carlsbad and reported on in 1923 by the National Geographic Society. The cave is said to be inhabited by enormous numbers of bats, and it is important to study the life habits of these little-known animals and the amount and value of the guano produced by them. An examination is contemplated of the artificial bat roosts now being operated by Dr. C. A. R. Campbell, at San Antonio, Tex., where large quantities of guano are said to be produced. The rate of deposition of this substance is a point concerning which little is known, and studies of this phase of the subject will receive special attention at all places when opportunity is afforded. It is intended to make as thorough a study as possible of the entire fauna of the Carlsbad cave.

Harry Malleis left Washington on February 22 for Belize, British Honduras, where he has already arrived en route to Lake Peten, Guatemala. Here he expects to spend the season capturing and raising specimens of the ocellated turkey and other gallinaceous birds of that region to supplement the stock now being cared for at Sapelo Island, Georgia.

Manuscript of "Birds of Alabama," by Arthur H. Howell, which was planned for publication as a North American Fauna, is being published by the Department of Game and Fisheries of Alabama. It has advanced to the page-proof stage.

#### ALASKA INVESTIGATIONS.

Chief Fur Warden Walker reports that rabbits have been placed on Smeaton, Ostoia, Village, and Cap Islands so far. It is hoped that later on the Kodiak and Sitka sections may be stocked with these animals.

Fur Warden Frank Dufresne returned to his headquarters at Nome the latter part of February from an extended inspection trip east along the Yukon River, returning by way of Noorvik.

Because of the mild winter weather prevailing on the Kenai Peninsula, conditions regarding moose have improved, as the animals have come down from



the hills earlier than usual to the valleys where there is plenty of feed. March is generally a month of heavy snow, however, and the moose may again be driven into the hills where feed is scarce.

Reports received from Anchorage indicate that the people of that section are taking a firm stand against the sale of game, and conditions are greatly improved in this regard. Fur Warden Hardy has cooperated in every way possible to prevent sales, and the local game organization has shown it is interested and has recommended changes in the game regulations. Chief Fur Warden Walker has been receiving recommendations for changes in both game and fur regulations and will soon have them in shape to send to Washington.

As a result of an appropriation of \$10,000 made by the Territorial legislature for stocking certain islands with large game animals, 10 deer have been liberated on Montague Island, in Prince William Sound, and 5 goats on Baranof Island, near Sitka. It is planned to liberate more deer in the Kachemak Bay region, on the Kenai Peninsula.

#### ECONOMIC INVESTIGATIONS.

F. G. Ashbrook recently returned from a trip to the Experimental Fur Farm at Saratoga Springs, N. Y., and reports the work progressing and all the animals located in their new quarters. This season 19 red foxes, 4 black foxes, and 9 skunks were pelted, and 16 foxes, 5 martens, and 7 skunks are on hand for the breeding season.

James Silver went to Lafayette, Ind., and Urbana, Ill., on February 17, to confer with extension officials relative to a rodent control program, and returned via Columbia, S. C., to assist in laying plans for an anti-rat campaign.

On report of the forest supervisor, at Choteau, Mont., to our district leader, that predatory animals were becoming numerous in the Sun River Game Preserve and taking a heavy toll of game animals, two hunters were transferred to the reserve and during the first two days succeeded in taking four mountain lions. Assistant Inspector Thompson, who accompanied the hunters, reports that these four lions had been living on the elk in that part of the country. One elk had just been killed, as the lion tracks were struck at the kill.

Hunter Caywood's poison work in the Futler Pasture, Colo., during December and January has resulted in a very effective cleanup of coyotes and will be of great benefit to the antelope in this region. There are approximately 100 head of antelope in the pasture.

F. E. Garlough was transferred on February 14 from the Denver Laboratory to Berkeley, Calif., where he will conduct laboratory experiments and field trials to determine the effectiveness of processed strychnine on rodents and predatory animals and to devise improvements in control methods.

Stanley P. Young reports excellent progress in controlling the rabies outbreak in Colorado. During December and January a total of 200 coyotes were poisoned in the affected area.



There has been a slight outbreak of rabies in Santa Barbara County, California, and Field Assistant Traub devoted the entire month of January to supervising work for combating the disease.

Timber wolves are becoming very scarce in Michigan since the large kill made during 1923. Hunters report seeing but few signs and a very small number of deer killed by these animals. The only wolf destroyed during January was poisoned near the Wisconsin-Michigan boundary line.

It is estimated that 25,000 people visited the rodent exhibit at the Western National Stock Show held in Denver during the week of January 19. The mounted specimens of ground squirrels, prairie dogs, pocket gophers, bobcats, and coyotes, attracted especial attention. The Colorado and Wyoming District cooperated in putting on the exhibit.

Hunter John M. Martin has pretty well cleared out the coyotes on the Niobrara Game Reservation, Nebraska, and is now extending his poison lines outside the reservation.

W. E. Spaw, a hunter working in Texas, destroyed 17 large red wolves in January.

A very old and destructive female wolf was taken in Missouri during January. This wolf had long been notorious in Stone and Barry Counties, not only for her stock-killing proclivities, but for her cunning, which had enabled her to elude capture until she was so old that her fangs were worn smooth with the gums.

In Cimarron County, Oklahoma, twelve farmers treated 4,035 acres of land, killing 98 per cent of the prairie dogs.

On February 12, Messrs. Gabrielson, Crouch, and Couch conferred in Pendleton, Oreg., on rodent control in the three Northwestern States, and on problems of cooperation and organization and the effect of calcium cyanide dust in ground squirrel operations.

Two wolves ventured a little too far across the Mexican border into Arizona during January, for one of our cooperative hunters caught the male a short time after his arrival and it is expected that the mate will soon be taken.

George W. Boyd was appointed junior biologist March 1 to assist A. M. Day in the Wyoming District.

W. A. Mullins, one of our most successful hunters in the Oklahoma-Arkansas-Missouri District, was appointed assistant predatory animal inspector on February 16.

One of our hunters in the Colorado District has written the following, which is of interest as showing how rabies may be spread from coyotes to bobcats: "To-day while riding from the Dietz ranch to the head of Cottonwood Creek to follow a poison line down the Creek and back to the ranch, about six miles from camp I was attracted by a barking noise that sounded like a dog

going into a hard fight. In some tall timber which had a thick undergrowth I was led by the noise to a point where I got a glimpse of a large coyote and large bobcat having a real battle. I could not shoot either of the animals from the horse I was riding as it was very scary. I dismounted, all the time watching the fight, and then I tied the lines of the bridle to the foreleg of the horse. The bobcat and coyote discovered me by this time and as they ran I shot at the bobcat through the thick timber but did not stop it. In a near-by tree I noticed another bobcat which was not taking part in the fight, but evidently was looking on; I succeeded in shooting this cat, killing it. From all I saw the coyote seemed to be pushing the fight but the cat refused to take a tree. The snow was gone from the ground where the fight occurred and was only to be found in patches. I could tell from the snow that the coyote and bobcat had moved some as they fought. This particular coyote had the nerve to take hold of this very large bobcat four or five different times. I could see from the signs that the fight had been on for some little time. One place in the snow showed the full print of the bobcat's body stretched out on its side and from the way the snow was torn up it looked as if the coyote had thrown him. There was plenty of fur from both the bobcat and coyote to be plainly seen."

H. S. Lindley was appointed March 1 as assistant predatory animal inspector in the Texas District.

C. E. Beebe is one of the few hunters to make extensive trips during the winter into the isolated sections of Montana which it is impossible to reach without snow shoes. Last December while located on the south fork of the Flathead River 80 miles south of Columbia Falls, he captured a female lion and her three kittens whose eyes were not yet open. Knowing that the kittens were wanted for a zoological park, Mr. Beebe endeavored to bring them in alive. While he was building a fire for his night camp, his dog, which is naturally no lover of lions, proceeded to make short work of one kitten. Later a second kitten crawled from his pack sack, fell on the ice, and was injured so that it died. At the end of his 80-mile trip, Mr. Beebe had one live kitten, which according to last reports was doing well. On the trip to Columbia Falls the kitten was given a diet of canned milk.

H. P. Williams returned to Sheridan, Wyo., February 5, after a four months' stay in Alaska, where he made a study of wolf conditions and demonstrated methods for their control.

Sixty dead rats were picked up by I. N. Gabrielson and H. S. Speer around two slaughter houses and a hog feeding establishment in Portland, Oreg., after those places had been treated with calcium cyanide.

More than 7,000 jack rabbits were killed in the Missouri Slope country of North Dakota as a result of a drive put on during the first part of January.

#### FOOD HABITS RESEARCH.

E. R. Kalmbach has returned from Colorado, where he conducted experimental work in magpie control. Exceedingly mild temperature with no snow hindered the work somewhat, but enough information regarding the magpie's reaction to various baits was obtained to permit the completion of a report on

this bird. Animal baits were found to be much more attractive than vegetable under the weather conditions encountered. A method for exposing the suet used as bait in a manner safe to dogs and farm animals was adopted.

On the completion of his work in Louisiana, C. C. Sperry visited Union County in southern Illinois, to make a survey of the wild duck foods of Bluff Lake, controlled by the East St. Louis Hunting and Fishing Club. Recommendations were made for the improvement of this area.

H. L. Stoddard, who has been engaged to conduct the cooperative investigation of quail in the South was at Metcalfe, Ga., up to February 14, when he returned to Milwaukee, Wis., to complete certain unfinished work at the Public Museum there. Upon completion of this work he will return to Georgia to take up the quail investigation on a permanent basis.

#### GAME AND BIRD RESERVATIONS.

Feeding elk at the Elk Refuge, Wyoming, was begun on February 4, but due to the warm weather, only a small quantity of hay had been fed <sup>each day</sup> up to the middle of February. Approximately 135 tons of hay had been used up to February 23, when there was about six inches of snow on the Refuge.

In the development of plans for improving the conditions for birds at Big Lake Refuge, Arkansas, and Sullys Hill Game Preserve, North Dakota, the wardens have been putting up nesting boxes. Enlarging the nesting field of those ducks which lay their eggs in hollow stumps, has increased their numbers in many places.

L. L. Bryan, warden of Big Lake Refuge, reports a very large number of ducks, including many mallards, at that reservation.

Blackbeard Island, at the entrance to Sapelo Sound, Georgia, was restored as a bird refuge under the jurisdiction of the Department of Agriculture, by Executive order of February 15. It is to be used as an experiment station for the introduction and acclimatization of certain important game birds from Central America, particularly ocellated turkeys, curassows, and tinamous.

Sympathy is extended to Wesley D. Parker, Warden of Sullys Hill Game Preserve, whose brother was accidentally killed on February 20.

#### IMPORTATIONS.

Numerous applications for permits for the importation of quail from Mexico have been received this season, but shipments are on a somewhat different basis from those of previous years. The Mexican Government has limited the number of birds which can be shipped and has prohibited export from certain States, in an effort to regulate the traffic and prevent extermination of the birds in areas accessible to points of shipment. Permits issued for importations between February 16 and March 21 have authorized the entry of 28,506 quail.



## MIGRATORY-BIRD TREATY AND LACEY ACTS.

Mr. Lawyer addressed the annual conference of the League of Ohio Sportsmen at Columbus, Ohio, January 30, on the future of wildfowl shooting in America, and on February 20 he addressed the Central Pennsylvania Fish and Game Conservation Association in annual meeting at Harrisburg, Pa.

Mr. Lawyer, Warden Crin D. Steele, Deputy Warden Moody Creighton, and F. S. Knoblock, photographer, were engaged from February 7 to 15 in a patrol trip with the Bureau's motorboat "Curlew" on the Potomac River and Chesapeake Bay. A census of swans was taken in the waters and tributaries of Chesapeake Bay.

Frank L. Earnshaw, Assistant in Interstate Commerce in Game, attended the banquet of the Wild Life League of West Virginia, at Clarksburg, W. Va., on February 13. Mr. Earnshaw addressed the members on the work being accomplished by the Biological Survey in the conservation of wild life.

The following is quoted from Warden Mushbach's report for January 17: "About 15 miles northwest of Great Falls, Mont., near Vaughn, Cascade County, I saw from the train a band of 17 antelope, bucks, does, and fawns. Another passenger said he sighted a band of nearly an equal number up a coulee while I was counting the band of 17. These were not more than 200 yards from the track and they paid no attention to the train--not one of the bunch even broke a walk."

Warden Mushbach, in referring to his visit to Giant Springs, Mont., on January 19, states that he saw many mallard and golden-eye ducks on the springs, although the thermometer registered 5 degrees below zero. He was told that at times these ducks get their feathers coated with ice from the vapor of the springs so that they are unable to fly and may be easily captured.

In his weekly report for February 10 to 16, Warden Farnham states regarding his patrol of the Finger Lakes in New York: "Ducks are now on the lakes by thousands and appear very tame. I walked along the shores of Cayuga Lake within 6 rods of canvasback ducks and stopped and watched them feeding and they paid no attention whatever to me."

Wardens Tonkin and Steele attended the Oregon Outdoor Life Exposition in Portland, February 18 to 21, and report an excellent attendance and many visitors to the Bureau exhibit. Two Department motion pictures--"Birds of the Farallon Islands" and "Birds of Laysan Island"--were shown.

Warden Hilliard, Pleasantville, N. J., states in his report for February 3: "The water was alive with black ducks from Swan Bay to Motts Creek (New Jersey) and at the mouth of Mullica River and on out into Great Bay as far as the eye could see a duck. Two bay men told me the ducks had come in this section by the thousands the past week, and one said he has gunned this section for forty years and that there are more black ducks here than ever he saw before."

Following is an extract from Warden Mushbach's report for February 2: "Deputy State Warden A. T. Holmes states that a rancher living near the south

bridge near Billings, reported that this morning a flock of approximately 100 pintail ducks went over going north. This is most unusual for this section at this date, as the pintails do not, to my knowledge, stay anywhere near here during the winter. . . Papers recently told of geese being heard at night going north over Butte, Montana. This would also be unusual. Reports of robins and other migratory birds arriving are also coming in so that it appears many species are coming north at a most unusual time."

Mrs. Lillian Campbell, of Westgrove, Pa., was appointed stenographer-secretary in this Division on February 11 to fill the vacancy created by the transfer of Miss Ruth V. Stiles to the Division of Economic Investigations.

. The following appointments were made to the position of U. S. Deputy Game Warden during February:

Dent O. Thompson, Fish and Game Division, Columbus, Ohio.  
Sidney A. Stemmons, General Delivery, Dallas, Texas.  
Elmer S. Bugbee, 3450 Harriet Ave., Minneapolis, Minn.  
Kent Fisher, Rushville, Mo.  
Lloyd Napier, Shreveport, La.  
Samuel B. Wooley, Hazard, Ky.  
Ulysses G. Reed, 1248 N. St. Francis St., Wichita, Kans.  
Grant L. Shumway, State House, Lincoln, Nebr.  
Joseph A. Cannaway, Room 351, State Capitol, Little Rock, Ark.  
Julian P. Smith, 527 Brown Marx Bldg., Birmingham, Ala.  
Rupert R. Bonner, Aurora, N. C.  
Earl P. Armstrong, Oshkosh, Nebr.  
Lyman G. Fitzgerald, 24 - 15th Ave., Columbus, Ohio.

## Migratory Bird Treaty Act Cases Terminated - Reports Received during February.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barmeier and Heller*	2	Missouri	Hunting ducks from motorboat	\$65 each
Beckwith*	2	Iowa	Possessing ducks in close season	\$30 each and costs
Brown*	1	Alabama	Killing a flicker	\$5
Charlton and Harrison*	1	W. Virginia	Killing ducks from a powerboat	\$25
Holmes	3	Kansas	Hunting ducks in close season	\$5 each
Lawton*	1	Minnesota	Selling ducks	\$10
Miller	1	Maryland	Killing coots and bitterns	\$20 and costs
Monplasure*	1	Iowa	Killing a goose in close season	\$10 and costs
Ransom	1	Idaho	Possessing ducks in storage in close season	\$10
Shaver	3	Minnesota	Possessing ducks in storage in close season	\$5 each
"	1	"	Possessing ducks in storage in close season	\$10
Shaver and Ackernecht**	1	"	Possessing ducks in storage in close season	\$5
Shaver and Gervais**	1	"	Killing killdeer	\$5
Shaver and Gervais**	1	"	Hunting ducks in close season	\$10
Steele, O. D.	1	Iowa	Hunting ducks with an 8-gauge gun	\$25 and costs of \$12.55
Visart	1	Arkansas	Killing a heron	\$10
"	1	"	Hunting ducks from motorboat	\$10
Whitehead	1	Georgia	Killing doves in close season	\$10

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

## Cases Reported for Prosecution.

Barmeier	1	Illinois	Hunting coot from motorboat
"	1	"	Possessing grebes
Barmeier, Logan*,* and Chilbert**	1	Iowa	Killing ducks from motorboat
Birsch	2	Virginia	Killing snipe in close season
Birsch and Farnham	2	"	Killing coot from motorboat
Birsch and Walker**	1	"	Killing ducks from motorboat
Birsch and Richardson**	4	"	Hunting ducks after sunset
Birsch and Poole**	1	"	Hunting ducks from motorboat



<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Bloxson and Kinnamon**	1	Maryland	Killing ducks from motorboat
Charlton and Dicken**	1	Ohio	Hunting ducks after sunset
Charlton and Willson*	1	Michigan	Hunting ducks prior to half an hour before sunrise
Graves*	1	Maryland	Hunting ducks from motorboat
Hilliard	1	New Jersey	Hunting ducks after sunset
Kelsey	1	So. Dakota	Killing swans
"	3	" "	Hunting ducks after sunset
Linebaugh and Frey**	1	Kentucky	Selling ducks
Merrill and Sessler*	8	Illinois	Hunting ducks after sunset
Merrill and Scholler*	2	"	Hunting ducks after sunset
Merrill and Scholler*	8	"	Possessing ducks in storage in close season
Pacetti	2	Florida	Killing ducks and coots from motorboat
Riddick	1	Texas	Killing doves in close season
Riddick and Hampe**	1	"	Selling ducks
Senac** and Domingue**	1	Louisiana	Selling ducks
Steele, R. C.	1	Washington	Hunting ducks after sunset
Steele, R. C., and Jones**	2	"	Killing ducks after sunset
Stadlmeir and Higgins**	2	Rhode Island	Shooting ducks after sunset
Thrasher*	2	Missouri	Killing ducks in close season
Tonkin and Gramse**	1	Oregon	Possessing ducks in close season
Tonkin and Loughery**	3	"	Possessing ducks in storage in close season
Visart	1	Arkansas	Hunting ducks from a motorboat
"	2	"	Killing blue herons
Wheeler**	1	Massachusetts	Possessing sanderlings
Whitehead and Harrell*	1	Georgia	Killing robins
Whitehead and Harrell*	4	"	Killing doves in close season

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\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Vol. 5

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No. 4

## GENERAL NOTES

Doctor Nelson left Washington on April 5 for Florida, where he will spend the next few weeks looking over conditions pertaining to migratory birds and bird reservations. En route he will stop at Sapelo Island, Georgia, where game birds from Central America have been recently introduced under a cooperative arrangement with Howard E. Coffin, who provided the funds for the purpose.

Were Doctor Nelson in Washington, he would doubtless blue-pencil the following personal references. Since he is at a safe distance, however, we have the temerity to quote from a recent article under the title, "This Man Lives on Courage," which affords our field associates an unusual opportunity to share with us a little glimpse into phases of Doctor Nelson's personality and an acquaintance with some of his achievements in the face of what would have been to most people insurmountable obstacles. The article is from the facile pen of Herbert Corey, and appears in Collier's, for April 12, 1924 (page 12). The following extracts speak for themselves and make further comment unnecessary or even the suggestion that the article be read in full by those connected with the Biological Survey or acquainted with its Chief:

"The most courageous man we know of is Dr. Edward W. Nelson. ... He knows how to sell his ideas to the people from whom he wants cooperation. Most of the time that means Congress. Collier's and its readers want to see 'enlistment in the public service of the best and most capable minds.' Dr. Nelson fits that description. ...

"Edward W. Nelson ... helped plant the American flag on Wrangell Island before Stefansson ever heard of it. His writings on the Eskimos ... are still the most important. ... He has done more than any other, perhaps, to save our wild game from indiscriminate slaughter. ... His methods have always been simple, direct, and forceful. He is a gentle, kindly, lovable man who does not know when he is licked. ...

"When he was eighteen years old his writings came to the attention of Professor Spencer F. Baird, then head of the Smithsonian Institution. When Baird heard that a meteorologist was to be stationed at an army post in Alaska he protested. ... 'Why not send a live young naturalist who can take your observations in his spare time? I have the man.' Nelson was sent ... twenty years before the discovery of gold. He spent four years there. ...

"He was a member of the relief expedition sent out to find the ill-fated Jeannette. ... He was exiled to Arizona and told that he would always be a hopeless invalid. He was neither hopeless nor an invalid. ... He became a member of the first scientific expedition into Death Valley, and spent the next fourteen years in Mexico and Guatemala, as a field naturalist for the Biological Survey. Then he gave Lower California its first thorough going over--on horseback--since the days of the conquistadores.



"In 1916 he became chief of the Biological Survey. ... It was Dr. Merriam who saw the necessity of making the Biological Survey an economic necessity to the country, but it was Dr. Nelson who made it. ...

"The Biological Survey is able to do its work to-day, or some part of its work, for the field is an ever-widening one, because Dr. Nelson has been able to sell the idea to those most interested. The States cooperate with the Survey, but--what is of far more importance--the societies of sportsmen and farmers do likewise. They help with money and man power. To them the Survey is not an arid bureau filled with dusty scientists, but an active, hustling, all-alive body that makes good. It talks and does the things they understand.

"Dr. Nelson would not agree that he should be praised for having brought about this desirable consummation. He is modest. At the most, one might force him to admit that he has helped."

The Biological Survey is being represented at the Sixth Annual Stated Meeting (the fifth anniversary) of the American Society of Mammalogists at Boston, Mass. (April 15-17), by Messrs. Henderson, Palmer, Goldman, Jackson, Bell, and Ashbrook.

The members of the Yukon expedition, referred to in a previous issue of The Survey, left Nenana on March 21, traveling on snowshoes and transporting their baggage by means of dog sleds. They reached Tacotna about April 2, and purposed leaving in a day or two for the Delta. Fur Warden Denny accompanied the party to Tacotna, whence he will return to Fairbanks. It is planned to have Fur Warden Dufresne, of Nome, join the others when they reach the lower Yukon. O. J. Murie, a field naturalist who has spent several years in Alaska in the service of the Biological Survey, has charge of the expedition. It is planned to secure the assistance of Eskimos in capturing ducks and geese and other migratory wild fowl during their period of molting in July and August and banding them on a large scale.

Walter P. Taylor is cooperating with Charles G. Poole and Joseph Keyes, and with the California Fish and Game Commission, in investigating the possible relation of wild birds, particularly cranes and turkey vultures, to the transmission of foot and mouth disease in Merced County, California.

The following publication of the Bureau was issued in March:

"Mouse Control in Field and Orchard," by James Silver, Biological Assistant. Farmers' Bulletin No. 1397, ii, 14 p., 13 fig., received April 11.

Among manuscripts submitted for outside publication in March were:

Ashbrook, Frank G. "A Wild Life Masquerade," for The Farm Journal.  
Couch, Leo K. "The English Sparrow in Western Washington," for Western Washington Experiment Station Bulletin.  
McAtee, W. L. "Notes on Drift, Vegetable Balls, and a Food Product of Inland Waters," for the American Naturalist.  
Malloch, John R. "A New Bombyliid Fly from New South Wales," for the Proceedings of the Linnæan Society of New South Wales.  
Nelson, E. W., and E. A. Goldman. "Mexico," for The Naturalists' Guide to the Americas (under auspices Ecological Society of America).



Preble, Edward A. "The Mackenzie Watershed, Northern Hudson Bay Region, Upper Yukon Region, and the Arctic Islands," for Naturalists' Guide to the Americas.

Scheffer, Theo. H. "Notes on the Breeding of Peromyscus," for the Journal of Mammalogy.

### BIOLOGICAL INVESTIGATIONS

F. J. Lincoln spent the period from February 7 to 20 at the bird banding station at Thomasville, Ga., where new apparatus for trapping birds was tested. Dr. John B. May, of Cohasset, Mass., is operating that station this season and has succeeded in trapping at least ten species of birds that had not been previously captured. Doctor May was a visitor at the Washington office on March 12 and 13, and on the evening of the latter date gave a lecture on birds before the District Audubon Society in the auditorium of the National Museum. S. Prentiss Baldwin, of Cleveland, Ohio, also was here on March 25, on his return from Thomasville, Ga.

Other visitors during March included Laurence B. Fletcher, secretary of the Northeastern Bird Banding Association; C. H. Watson, of Andover, N. Y., who has been spending a part of the winter in Florida; E. E. Critchfield, of Wheaton, Ill., who has recently established a station at his winter home at Seminole, Ala.; and Miss C. E. Groetzinger, who assists in the operation of the station of S. Harkness McCrea, at Darien, Conn. During the month of March the records for more than 3,000 new birds banded were reported to the office. This brings the total for the year to over 25,000.

Theo. H. Scheffer during late February continued studies in central Washington on the life habits of various injurious rodents. Pocket mice were found active in small numbers at Lind, contrary to experience in previous years. Near Kennewick, however, no pocket mice were secured. Other rodents found out of hibernation included the Yakima ground squirrel, the latter being reported out the last week in January. Other common rodents found to be active during February were grasshopper mice, white-footed mice, and harvest mice, the two last breeding.

Vernon Bailey reports success in investigating the fauna of the great cave near Carlsbad, N. Mex. Owing to the continuous cold and windy weather, however, the bats which are reported to spend the winter there in large numbers had not yet become active at the beginning of April.

### ALASKA INVESTIGATIONS

Fur Warden A. H. Hardy, of Anchorage, has been authorized to purchase a small motor boat for patrol work in his district.

Reservation and Fur Warden D. H. Stevenson, of Unalaska, reports very severe winter weather on the Aleutian Islands during the past two months, after an unusually mild winter.

## ECONOMIC INVESTIGATIONS

A. E. Gray reports that during the latter part of February a survey was made of the pocket gopher control work in the Mesilla Valley, New Mexico. Excellent progress was being made by both poisoning and trapping squads. A careful survey of the area worked in January showed that the remaining infestation was exceedingly light.

Of particular interest during February was the final work accomplished under the supervision of S. P. Young in the Gardner area in Colorado, where there has been an epidemic of rabies among coyotes, other predatory animals, and dogs since last November. Actual work in this area was brought to a close on March 27. Early in February it was realized that few coyotes remained in this section, and that these few had successfully evaded death from poison, being animals termed in hunter parlance as "poison-wise," but special effort, successful in the majority of cases, was made to poison these particular coyotes. One poison station placed during the campaign has to its credit a record of 16 coyotes. Where it was not possible to poison, close trapping was resorted to, which proved likewise successful. Assistant Inspector J. W. Crook and Hunter Krepps, who have been looking after this work, have returned to the San Luis Valley to resume work on the sheep ranges.

Plans for cooperative rodent control work in Utah were made by B. B. Richards with many farmers and project leaders who were attending Farmers' Educational Weeks conducted throughout the State under the supervision of the Extension Service.

Hunter Fay Clark, of California, took 35 coyotes during the month. The coyotes in his district feed largely upon deer and antelope that range in the Mount Dome country, and they are largely responsible for the slow increase in the antelope herd in this locality. Catches of this kind will go far towards saving the herd.

An interesting re-treatment is reported by L. C. Whitehead, of Texas, as follows: A number of live prairie dogs were left in a couple of the Jackson ranch dog towns where the grain had been put out just prior to heavy rains. A dumping ground lay close to one of these towns and in re-treating, the grain was dropped into the holes and an old can tossed over each entrance. Rather than force an exit past the cans the dogs took the bait in the entrance of the burrows, so that complete kills were effected by this "mopping up" method.

The manager of a large cattle company on the Pine Ridge Reservation, South Dakota, reported to Louis Knowles that several hundred head of cattle were lost each winter due to the attacks of magpies. No loss was suffered this past winter from this cause, owing to well-organized poisoning campaigns against these birds, made by hunters under Mr. Knowles' direction.

At the annual convention of the New Mexico Wool Growers Association, in Albuquerque in February, the sheep men, with practically no exceptions, expressed themselves as being satisfied with the cooperative predatory-animal work and passed a resolution to this effect.



Lisle Morrison left Washington, March 22, on a month's trip to visit field offices at Manhattan, Kans., Denver, Cheyenne, Albuquerque, Phoenix, and San Antonio.

E. F. Pope reports 18 timber wolves taken in his district during February, 12 being in Missouri, 3 in Arkansas, and 3 in Oklahoma. Among the Missouri wolves destroyed were several very large ones, 3 of which had attained a good deal of notoriety by their depredations.

K. P. Pickrell, assistant to M. E. Musgrave in the predatory-animal work in Arizona, resigned March 31 to enter business.

Considerable publicity has been given to letters written by a school-teacher of Grant, Colo., to the President, inviting him to come out and kill a mountain lion because of the scare it had given her on several occasions. One of the distinguishing features of this lion was that it was said to have the largest feet of any lion in the State. Hunter Dave Crouch, who was finishing up some lion work in the Pike National Forest, assumed the obligation and got the lion on March 21. It was a fairly large male, and shortly before its death it had killed two deer within the Denver Mountain Park Game Refuge. Mr. Crouch deserves a vote of thanks from all timid school-teachers in that locality.

The new moving picture entitled "The Modern Pied Piper," the scenario of which was written by James Silver, in charge of the Eastern Rodent Control District, for the purpose of stimulating interest in rat control, is having an unusual demand. The six films which have been provided for general distribution are being booked nearly two months in advance. Those planning anti-rat campaigns and wishing to make use of this film should keep this in mind and make application sufficiently in advance.

On March 18 the fur dealers of Washington, D. C., formed a local association to cooperate with the National Association of the Fur Industry and to build up public confidence in the fur trade. The meeting was held in the Harrington Hotel. F. G. Ashbrook was present and gave an illustrated talk on the muskrat industry on the Eastern Shore of Maryland. Mr. Ashbrook was elected the first honorary member of this association.

One of the most important areas poisoned in Arizona during the past month was the right-of-way belonging to the Arizona Eastern Railroad Company, and extending through the very heart of the farms of the Gila Valley and flanked on both sides by irrigated lands. Since the right-of-way is of higher elevation than the adjacent lands, it offers protection from irrigation waters to pocket gophers and thereby provides an ideal breeding ground for these destructive rodents.

Encouraging reports have been received of the results of cooperative coyote control work in northern Lea County, New Mexico, during the past three years. A small band of antelope has been staying in that part of the country for several years, but no fawns had ever been seen until this last season (1923), when, due apparently to the scarcity of coyotes, a great many were observed.

The following changes have recently been made in the clerical force of the Division: Miss Ruth Stiles resigned March 15, and Mrs. May Jeffries, March



31. Mrs. Helen Wood, of the Bureau of Chemistry, and Miss Lura DeMass have been appointed, effective April 1, to fill vacancies created by these resignations.

Cleve Miller, a hunter on the cooperative roll of Arizona, holds the record for the largest catch of mountain lions made in one month by any hunter in the employ of the Bureau. He took 15 during February. Twenty-one lions were taken in the district during the month.

Carlyle Carr is conducting a demonstrational clean-up campaign against woodchucks in Morgan County, Indiana, and will do similar work in Stark County, Illinois, during May. These campaigns are arousing considerable interest and are being observed with interest by a number of other counties contemplating similar work.

F. G. Ashbrook spent March 8 and 9 in Dorchester County, Maryland, inspecting muskrat marshes. The muskrat catch in this section of Maryland was not so large this year as last. Many trappers reported that there was an epidemic of disease among the animals. Similar outbreaks have been reported among muskrats in Canada and the southern part of Idaho.

An unusually successful anti-rat campaign was recently completed in the city of Columbia and throughout Richland County, South Carolina. The work was carried on by the Civic League of Columbia and other organizations in cooperation with the State Extension Division and the Eastern Rodent Control District of the Biological Survey.

James Silver is being congratulated on the birth of a son, April 15th.

#### FOOD HABITS RESEARCH

E. R. Kalmbach visited the Aberdeen Proving Ground last month to see that proper frightening devices were installed over the wild celery beds where phosphorus has been killing many hundreds of canvashacks. A second catastrophe occurred among the ducks between March 10 and March 20, at a time when frightening devices previously installed had been torn out by ice. A boat with a human effigy is now moored at this point, and an automatic firing gun will be kept in operation on a float until the migratory ducks have moved on.

H. L. Stoddard resumed work in connection with the quail investigation on March 17. His headquarters are at Beachton, Crady County, Ga.

#### GAME AND BIRD RESERVATIONS

A. P. Nelson, Warden of the Elk Refuge, Wyoming, estimated, on March 21, that there were at least 2,500 elk wintering in the vicinity of Gros Ventre River and its tributaries, but owing to light snowfall in the mountains during the winter it was impossible to make an accurate count. The snow was loose and not crusted sufficiently to prevent the elk from traveling through the mountains. In the Jackson Hole territory, Mr. Nelson estimated that there were approximately 9,000 elk, covering the entire Snake River drainage and south to the mouth of Greys River. Up to the time Mr. Nelson made his report only two calves had died

out of 3,800 head of elk on the feeding grounds at the Elk Refuge - one at headquarters and one on the Germain tract. Compared with the past, this is an extraordinarily small number. A later report from Mr. Nelson states that at the end of March approximately 4,800 elk were being fed at the Refuge, since practically all the elk (about 1,000 in number) that were wintering on the foothills east of a neighboring ranch have come to the Refuge.

Spring migration of the birds has commenced at Chase Lake Bird Reservation, North Dakota, according to a report dated March 27. An abundance of grass on and near the refuge affords excellent cover for the nesting birds.

Warden G. M. Benson reports thousands of swans, snow geese, and ducks in the vicinity of Lake Malheur Bird Reservation, Oregon.

Six pairs of wood ducks and four goldeneye ducks are being procured for propagating purposes at Sullys Hill Game Preserve, North Dakota. Three flocks of geese were observed flying north in the vicinity of this preserve on March 23. This is the second report of geese seen in the locality this season.

A revised list of State Game and Bird Reservations is now ready for distribution. Copies may be had by applying for Form Bi-652.

Charles M. Conger, Warden of the Conconully Bird Reservation, Washington, states that there was a large flock of geese on the refuge during March but that less ducks are there than usual for this time of the year. Native pheasants were coming to the refuge during the past month and are now quite plentiful. Beavers are very numerous.

#### IMPORTATIONS

Considerable activity has recently been manifested in the importation of quail from northeastern Mexico. The total number of birds actually imported between the first shipment this year, on February 16, and the end of March was 20,183.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Lawyer was in New York City on March 1 and 2 conferring with game conservationists on matters relative to the enforcement of the Migratory Bird Treaty, Act, and Regulations.

In his report for the week of March 2 to 8, Warden Pacetti states that there has been little damage done by robins in the strawberry fields of Florida this season although the swamps are full of robins. He says that these birds, as well as others, have been feeding on Palmetto berries, of which there is a heavy crop, in preference to strawberries.

Warden Mushbach, of Billings, Mont., reports that he has never known of as many geese being killed in Montana as last fall, and that he has never seen mallards so plentiful in the State. He says further that "in November most of the hen mallards went south but the green-heads remained until everything was frozen solid; even then many of them did not leave. For some time after the



lakes froze solid in the lake basin section, flocks of several thousand green-heads remained to feed in the grain stubbles and then during the day would come in and rest on the ice of the lakes. Many of these ducks did not go south at all and are here to-day" (February 29).

Louis and Sebastino Esposito, brothers, must serve their life sentences as imposed by the trial court for slaying Edgar A. Lindgren, U. S. Game Warden, near Council Bluffs, Iowa, in August, 1922. They were convicted of murder in the second degree, and appeal in their behalf to the Supreme Court of Iowa was denied in a decision rendered by that tribunal on March 8.

The following is contained in Warden Riddick's weekly report for February 24 to March 1, inclusive: "Was told at Dallas by Lloyd Doolittle (Federal deputy game warden) that many robins were dying around there from the effects of eating the China berry. They would be seen dead under the tree. One man reported to Mr. Doolittle that he had found two robins under a China berry tree, apparently drunk. He took the birds to his house and gave them some grease and they got all right again."

Mr. Denmead, in company with F. G. Ashbrook, of the Division of Economic Investigations, made a tour by automobile of Dorchester County, Md., on March 8 and 9, investigating the conditions of migratory birds and muskrats.

Warden Charlton, in his weekly report for March 2 to 8, inclusive, states that from 500 to 1,000 geese wintered on Lake St. Marys in Ohio, and on the dates mentioned were still there.

As serving to indicate the degree of hazard risked by the operator of an airplane in hunting migratory wild fowl from the air, the following is quoted from a letter received from a violator recently apprehended in Oklahoma for shooting wild geese from an airplane:

"The whole thing started in a spirit of adventure, and we had no knowledge that we were violating any game laws. We first conceived the idea to go up and spot the geese on the ground, then land and do the best we could slipping up on them. Some bystander made the remark that a goose flew faster than a plane and that it was impossible to get near enough to kill one from a plane. In a dare-devil spirit we decided to demonstrate, and since it is so hazardous I never would have guessed that it was against the law. In the first place, it is necessary to be out on the wing, and if strapped or tied on in any way it is almost impossible to shoot accurately, then all conditions such as visibility, perfect operation of the motor, and a skilful pilot are necessary. To my mind a man takes his life in his own hands, and after the one successful shoot I had enough. I nearly fell off at one time, and was very much excited and elated when we landed, but as I remember it we got some four or five geese."

Mrs. Lillian Campbell, employed as stenographer-secretary in this Division, resigned on March 31 to return to her home in Westgrove, Pa. Mrs. Sara K. Oswald has been transferred from the Office of the Secretary (Extension) to fill the vacancy caused by the resignation of Mrs. Campbell.

Members of the Bureau regret to learn that Warden Linebaugh, who resumed the active performance of his duties on February 18 after an illness of several



months, is suffering a recurrence of the ill health from which it was hoped he had completely recovered.

A fine of \$100 and costs amounting to \$14.50 was assessed in State court against a violator at Carroll, Iowa, on March 29, on a charge of possessing wild ducks and geese during close season. The case was obtained by U. S. Game Warden Steele, of Council Bluffs, cooperating with Deputy State Game Warden W. H. Pottmest, of Manning, Iowa.

Reports of large fines continue to reach the Bureau. Three violators' apprehended killing wild ducks and hunting without a license in Nebraska during March were arraigned in State court for Merrick County at Central City, Nebr., and a fine of \$325.60 was assessed against one offender and \$525.60 each against the other two. The last report in the matter indicated that two of the accused were still in jail, where it will be necessary for them to remain for five months and twenty-seven days unless the fines are paid. The cases were obtained by Deputy State Game Wardens Elmer Heintzelman and John J. Gilligan, both of Grand Island, Nebr.

Warden Holmes, of Orleans, Nebr., while working in cooperation with Deputy State Game Warden Peter Varley, of Schuyler, on March 17 apprehended two parties hunting ducks, the violators having in their possession 24 birds. The accused were arraigned before the county court, where they entered pleas of guilty and were fined \$304.70 and \$305 each, a total of \$609.70. The fines were paid.

The following appointments were made to the position of U. S. Deputy Game Warden during March:

Ernst Von Lengerke, 264 Ivy Court, Orange, N. J.  
Raymond L. Harrison, 500 So. Second St., Albuquerque, N. Mex.  
E. T. Judd, Cando, N. Dak.  
Guy H. Dicken, Oak Harbor, Ohio.  
Jesse L. Nevill, Ketchikan, Alaska (Fur Warden)  
Sylvester Cooney, Malvern, Iowa.  
Karl Y James, 1838 W. 25th St., Cleveland, Ohio.  
Samuel F. Gentry, Stanford, Ky.  
F. Royston Stifler, Bel Air, Md.

Appointments of the following to the position of U. S. Deputy Game Warden were terminated during March:

William D. Gaskill, Ocracoke, N. C.  
Gordon A. Guthrie, Miller, Ohio.

## Cases Reported for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	1	Missouri	Killed a gull
Birsch and Capps*	2	Virginia	Hunting jacksnipe in close season
Birsch, Hope**, and Johnson**	1	"	Killing jacksnipe in close season
Bloxsom	1	"	Possessing ducks in storage in close season
"	2	Maryland	Killing swans
Bloxsom and Watson**	1	"	Killing swans
Charlton and Swope**	1	Ohio	Possessing doves in close season
Holmes and Armstrong**	2	Nebraska	Killing ducks in close season
" " "	2	"	Shooting at ducks in close season
Holmes and Varley**	3	"	Hunting ducks in close season
Merrill	1	Illinois	Possessing ducks in close season
Merrill and Sessler*	1	"	Possessing ducks in close season
Merrill and McQuirk**	1	"	Illegal shipping of birds.
" " "	1	Iowa	Illegal shipping of birds
" " "	2	Michigan	Illegal shipping of birds
Facetti	1	Florida	Selling ducks and jacksnipe
"	1	"	Killing ducks and coot in close season
"	2	"	Killing sandhill cranes
Perry and Dickerson*	1	Mississippi	Killing a flicker
" " "	1	"	Killing robins
Ransom	2	Washington	Killing ducks and coot in close season
Riddick	3	Texas	Killing doves in close season
"	1	"	Offering aigrettes for sale
Scholler* and McQuirk**	2	Wisconsin	Illegal shipping of birds
Shaver	3	Minnesota	Possessing ducks in storage in close season
Shaver and Kelsey	2	Missouri	Killing ducks in close season
Steele, R. C.	2	Oregon	Killing swans
Tonkin and Boor**	1	Idaho	Possessing ducks in close season
Tonkin and Gramse**	1	Oregon	Possessing ducks in close season
Visart	2	Oklahoma	Killing geese from airplane
Visart and Rison**	1	Arkansas	Possessing a bittern
Whitehead	6	Alabama	Killing doves in close season
"	15	Georgia	Killing doves in close season
Whitehead and H. G. Rowland	4	"	Killing doves in close season

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden.

## Migratory Bird Treaty Act Cases Terminated - Reports Received during March.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barmeier	1	Illinois	Hunting coot from powerboat	\$10
"	2	"	Hunting ducks in close season	\$10 each and costs
Farnham and Hilliard	3	Penna.	Killing grebes	\$25 each
Merrill and Sessler*	4	Illinois	Hunting ducks after sunset	\$10 each
Oliphant*	2	Virginia	Hunting ducks at night	\$25 each
Pacetti	1	Florida	Killing ducks in close season	\$5
"	2	"	Killing sandhill cranes	\$5 each
"	3	"	Hunting ducks from motor-boat	\$1 each
Pacetti and Whitehead	1	"	Possessing skin of an egret	\$5
Ransom	1	Washington	Killing ducks and coot in close season	\$50
Shaver	3	Minnesota	Hunting ducks after sunset	\$5 each
"	1	"	Possessing a loon and wood duck	\$5
Stadlmeir	1	Rhode Island	Killing a grebe	\$25
Steele, O. D.	2	Iowa	Hunting ducks after sunset	\$5 and costs of \$17.30 each
" " "	2	"	Hunting ducks after sunset	\$5 and costs of \$12.20 each
Steele, O. D. and Holmes	2	"	Killing ducks from motorboat	\$25 and costs of \$6.15 each
Visart	1	Arkansas	Selling ducks	\$10 and costs of \$11.40
Whitehead	1	Georgia	Purchasing a goose	\$1
"	1	"	Killing a woodpecker	\$1
"	3	"	Killing doves in close season	\$5 each
Whitehead and Mills**	1	"	Purchasing a goose	\$1

\* U. S. Deputy Game Warden

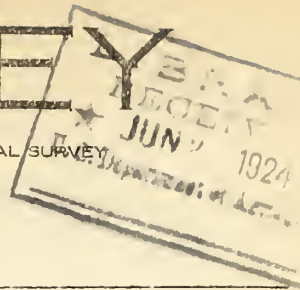
\*\* Deputy State Game Warden.





# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE



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No. 5

## GENERAL NOTES

Members and former members of the Biological Survey on the program of the annual meeting of the American Society of Mammalogists, held at Cambridge, Mass., April 15 to 17, with the titles of their papers were Dr. Lee R. Dice (former member), "Scientific value of predatory mammals"; Dr. W. B. Bell, "Predatory mammals, a problem in economics"; E. A. Goldman, "The predatory mammal problem and the balance of nature"; Dr. Ned Dearborn (former member), "Predatory mammals as a source of fur supply"; and Dr. T. S. Palmer, "Deer of the United States from a statistical standpoint." Dr. W. H. Osgood, of the Field Museum of Natural History (formerly of the Biological Survey), was elected president of the society, the two past-presidents now being Doctor Merriam and Doctor Nelson, the first and the present heads, respectively, of this Bureau. The only other changes in the list of officers were the choice of W. D. Matthew and Glover M. Allen as vice-presidents. Mr. Goldman takes the place of the latter in the 1923-25 class of directors, and Doctor Palmer was made one of the directors in the class 1924-26. The personnel of the standing committees remains unchanged.

The following publications of the Bureau were issued in April:

- "Some Common Game, Aquatic, and Rapacious Birds in Relation to Man," by W. L. McAtee and F. E. L. Beal. Farmers' Bulletin No. 497 (Rev.), 28 pp, 14 figs. Received April 19.
- "Birds of Alabama," by Arthur H. Howell. Issued April 19 by the Department of Game and Fisheries of Alabama, 384 pp, 31 figs. Received May 1.
- "Cottontail Rabbits in Relation to Trees and Farm Crops," by D. E. Lantz. Farmers' Bulletin No. 702 (Rev.), 14 pp, 4 figs. Received May 3.

Among manuscripts submitted for outside publication in April were:

- Kalmbach, E. R. "Twenty-five Hundred Dollars Reward" (for the destruction of vermin), for Nature Magazine.
- Kellogg, Remington. "Contributions to the Tertiary History of the Cetacea on the Pacific Coast of North America," for publication by the Carnegie Institution of Washington.
- "A Phocetoid Cetacean from Santa Barbara County, California," for Smithsonian Miscellaneous Collections.
- McAtee, W. L. "Birds and the English Whitethorn," for The Auk.
- "Sapsuckers Distributing Diseases of Trees," for The Auk.
- McAtee, W. L., and J. R. Malloch. "Some Annectant Bugs of the Superfamily Cimicoidea (Heteroptera)," for Bulletin of the Brooklyn Entomological Society.
- Malloch, J. R. "Two New Cordylurid Flies from the Pacific Coast," for Proceedings of the California Academy of Sciences.

- Murie, O. J. "The Clarke Nutcracker in Interior Alaska," for The Auk.
- Oberholser, Harry C. "Descriptions of New Treronidae and Other Non-Passerine Birds from the East Indies," for Journal of Washington Academy of Sciences.
- "February and March Birds About Washington, D. C.," for Bird Lore.
- "Ninth Annual List of Proposed Changes in the A. O. U. Check-List of North American Birds," for The Auk.
- "Some Curious Birds," for Nature Magazine.
- Taylor, Walter P., and H. C. Bryant. "Relation of Wild Birds to the Foot-and-Mouth Disease," for California Fish and Game.

### BIOLOGICAL INVESTIGATIONS

Several members of the Biological Survey staff have assisted with the spring bird classes and walks conducted by the Audubon Society of the District of Columbia, as has been the custom for some years past. The classes for the study of specimens were held on five Monday afternoons, March 17 to April 14, from 4:45 to 5:45. At the first meeting Dr. H. C. Oberholser lectured on classification and on the use of the keys, for the benefit of those attending the classes for the first time. Others assisting as teachers were Dr. T. S. Palmer, E. A. Preble, A. H. Howell, F. C. Lincoln, Dr. W. B. Bell, and E. R. Kalmbach. Miss M. T. Cooke had charge of the specimens and prepared charts showing the arrival of migrants. The outings for the study of birds in the field were held six Saturdays, April 12 to May 17. One or more representatives from the Bureau attend each of these trips as instructors.

Vernon Bailey has continued his investigations of the caves near Carlsbad, N. Mex., during the month in cooperation with the National Geographic Society, and reports obtaining results of interest.

Dr. Walter P. Taylor, who, in cooperation with the Bureau of Animal Industry and the California Fish and Game Commission, has been investigating the possibility of certain birds being concerned in spreading the foot and mouth disease, reports having found no evidence to show that this is the case.

### ALASKA INVESTIGATIONS

Fur Warden J. W. Warwick, of Flat, recently seized 11 unprime beaver skins out of a shipment of 24 pelts.

Lillian I. Kay, of Juneau, has been appointed clerk in the office of E. P. Walker, Chief Fur Warden, at Juneau, effective May 1.

The propagation of white foxes in northwestern Alaska is being tried out for the first time. During the past month two permits have been issued for the capture of 50 pairs of these important fur bearers. One fox farm is being established on Shishmaref Island, the other at Teller.

Henry Winkel, who holds a permit to propagate foxes and conduct a reindeer farm on Kiska Island, within the Aleutian Islands Reservation, has purchased seven reindeer--three males and four females--from the Department's



herd on Umnak Island. There are now between 500 and 600 deer on the northern part of Umnak Island, the nucleus of which were the 36 animals placed on the island by the Bureau in September, 1913.

### ECONOMIC INVESTIGATIONS

Doctor Fisher returned to Washington on April 30 after a 10-day trip to confer with cooperators in St. Paul, Minn., regarding prospective predatory animal work in the State, and to attend the meeting of the Montana Livestock Association at Dillon April 24 and 25. On his return trip he made a short stop at Salt Lake City at the headquarters of the Utah District for the purpose of talking with the predatory animal inspector and the assistant in charge of rodent control work. At Dillon, Mont., he met many of the principal livestock owners of the State and gave them an outline of the work of the Bureau on the extermination of predatory animals and of rodents which injure the range. The lack of efficiency in the bounty system was brought out and a few of the men who had formerly supported it acknowledged that the operations of the Bureau were the more valuable in the extermination of animals which destroy livestock.

D. A. Gilchrist killed a rattlesnake near Arlington, Ariz., and upon opening it found an adult pocket gopher which he has preserved.

A big female wolf, known as "Two Toes," has been killed by J. J. Williams, of Montana, after being trailed through 10 feet of snow, and her death marks the end of a long list of killers in the Highwood Mountains. Ranging over a territory of 300 square miles, "Two Toes" has killed thousands of dollars' worth of cattle in the past few years. Her biggest kill was recorded in 1923 - 20 calves on two ranches in one week. Her den was dug out and 10 wolf cubs were taken alive.

An Arizona citrus grower reported high efficiency from pocket-gopher poison distribution by Messrs. Taylor and Foster, which is a part of the co-operative work between the Biological Survey and the Agricultural Extension Service of the University of Arizona. He showed them three grapefruit trees which had been girdled three years ago and had to be replaced this year. They were eight years old and bearing nine boxes of fruit to the tree. The owner stated that each was easily worth \$500 and that he figured his loss at \$1,500.

Damage to young fruit trees by pocket gophers has been recently observed in a number of orchards near Manhattan, Kans. In many cases the roots of four- or five-year-old trees, particularly cherry and plum, have been completely cut off a few inches below the ground. The pocket gophers feed on tree roots during the winter and often the first intimation of damage is when the tree leans over, and then it is discovered that it can be lifted from the ground.

Carelessness on the part of the owner of poisoned grain in Laramie County, Wyo., cost him \$80.15 last month in the death of four horses. This man had hung three sacks of poisoned grain in an open shed on his farm and later took five horses to pasture for a neighbor. With the first storm the horses took shelter in the shed, tore down the sacks, and ate some of the grain. Four died and one was saved. A judgment was rendered in favor of the

owner of the animals as the horses were killed by negligence and carelessness on the part of the owner of the poison.

An outstanding piece of work for the month was the capture by W. S. Beesley, in Taney County, Mo., of a notorious old black wolf known locally as "The Old Black Devil." For years past this animal has been a terror to the farmers of this county and of Boone County, Ark. He was caught last year in Boone County but escaped, leaving a toe in the trap. Caught later near Omaha, Ark., he was again successful in getting away. During the winter he was caught twice by Mr. Beesley and escaped, but not so the third time. The wolf weighed 78 pounds, the heaviest one reported by our Missouri hunters.

Hunter Edgar E. Watkins, of Grant County, Oreg., while hunting rabbits for bait with a 22-caliber pistol, ran on to two cougars on March 12 in a locality where none were supposed to be. With his small-bore pistol he succeeded in killing one and wounding the other.

S. R. Dunham, a hunter in Arizona, has been temporarily transferred to Nevada, where he and Assistant Inspector Rasmussen were successful in taking one adult mountain lion near Ely.

The short-tailed meadow mouse has added the destruction of cranberry beds in the State of Washington to its long list of nefarious activities, according to Albert Swain, who has just returned from an inspection trip in the district around Cohanset, Grays Harbor County, where the mice have been causing damage recently. Mr. Swain reports that the mice cut the bushes off above the ground and eat a small portion of the stalk, in some places over a quarter acre. As the cost of putting in a cranberry bed amounts to \$500 to \$600 an acre, the damage by the rodents might easily become enormous. An extensive poisoning campaign will be conducted against them. In the irrigated sections of eastern Washington these mice cause considerable damage to alfalfa crops and fruit trees. In western Washington they are active in destroying flower bulbs, which is causing considerable apprehension in view of the increasing importance of the bulb industry there.

Statements signed by persons in Arizona who cooperated in rodent control work with this Bureau and the Agricultural Extension Service, University of Arizona, indicate that growers thereby increased their 1923 income more than \$400,000. Campaigns were conducted in 14 counties with 3,390 cooperators, using 66,938 quarts of poisoned grain and 1,485 quarts of carbon bisulphide over 424,030 acres infested with prairie dogs, pocket gophers, or rabbits. Extended operations were conducted in Maricopa County, Ariz., with the result that pocket gophers did very little damage in this county. The 1923 crops sold for over \$23,000,000. The total cost to the State and Federal Governments for aid in rodent control to the farmers, stockmen, and citrus growers was \$30,000.

In the woodchuck campaign conducted by the Biological Survey and the Extension Department of Purdue University during the month of April in Morgan County, Ind., under the leadership of Carlyle Carr, a controversy arose between the farmers who desired to eradicate the woodchucks and the sportsmen and conservationists who claimed that, in fumigating the woodchuck burrows, all fur



bearing animals also would be destroyed. The matter was settled and the opposition eliminated by the State Conservation Commission cooperating with the county agricultural agents and Mr. Carr, when 17 woodchuck dens in various localities were dug out in the presence of State officials and no animals other than woodchucks were found.

#### FOOD HABITS RESEARCH

Charles O. Handley, an instructor in zoology at Washington and Lee University, has been appointed, effective May 1, to assist H. L. Stoddard in the quail investigation project in Georgia. Mr. Handley on two former occasions has worked in the laboratory of this Division under temporary appointment.

E. Raymond Hall, at present a teaching fellow in the zoological department of the University of California, has been temporarily appointed, effective May 1, to conduct an investigation of the food habits of pelicans at Pyramid Lake, Nevada, and their relation to trout and other fishes. Mr. Hall last year was engaged in laboratory work in the Division.

#### GAME AND BIRD RESERVATIONS

Warden Frank H. Rose has succeeded in getting 406 buffalo into the feeding inclosures at the Bison Range, and the work of feeding them on the hay purchased has started. The buffalo will be held and fed in the inclosures during the period of the development of the range grasses to the seeding stage, and then will be turned out on the range. In placing the buffalo in this pasture, an excellent opportunity was afforded to make an accurate count of them. The warden estimates that the herd now includes 580 animals, not counting the calves of this spring.

The last of the game meat held in a cold storage plant at Ronan, Mont., has been disposed of recently to a cafe at Bozeman, Mont. A clipping from the Bozeman Chronicle has been received in which this cafe advertises elk steaks from the Bison Range at 65 cents. The public is invited to "come and enjoy a good feast."

Feeding the elk ended at headquarters at the Elk Refuge, Wyoming, on April 6 and at the Ditwater tract within the Refuge on April 9. Approximately 510 tons of hay were fed. The winter was very mild, with the snowfall far short of normal, and at no time was there sufficient snow to prevent the animals from procuring considerable forage from the pasture lands. In March, when about 15 inches of snow fell in the near-by mountains, approximately 4,800 elk were being fed at the Refuge, which was nearly 1,400 more on the two feeding grounds than were there the previous winter. The number of animals that died on the Refuge was only 18, and of these only 3 were calves. This is very gratifying, as the principal losses in the past have been among the calves of the year or yearlings.

The feeding corrals for the calves which were set up at the Elk Refuge some time before the general feeding started were not frequented by the calves



during the winter, though the best quality of hay was kept available to them there at all times. It is very evident that the calves will not enter the corrals as long as they can obtain sufficient feed with the older animals.

Plans are under way for making improvements at the Elk Refuge headquarters before the beginning of the tourist season.

Warden L. L. Bryan reports a number of egrets nesting at Walker Lake Refuge, Arkansas, in spite of the fact that a drainage ditch recently constructed in that locality has practically drained the lake. Warden Bryan has put up 25 hollow-tree nesting boxes at Big Lake Refuge for attracting tree-nesting ducks. The wood ducks are unusually plentiful on the lake this year and the warden believes that some of the nesting boxes are occupied. The water on the lake has been very low this spring and is in excellent condition for extensive plant growth to supply bird food during the coming year. On account of low water, very little fishing has been done. The warden reports a large colony of frogs on the east side of Big Lake Refuge. Prohibiting the use of headlights on the lake will stop the practice of frogging at night and will allow the frogs to increase to somewhere near the number which have been taken from the lake in the past. The warden states that frog catches have amounted to from 70,000 to 80,000 a season. The principal feed of the frogs appears to be crawfish, which are plentiful.

The birds came early to Lake Malheur Refuge, Oregon, this year. There was practically no snow reported in the mountains, and the water at the lake is extremely low. As a consequence, there is great competition for water by the water users in the locality, who have filed upon a great deal more than there is flow to supply. Some progress has been made in the poisoning of ravens, which are very plentiful at the Refuge and cause heavy losses among the nesting water birds there.

So far this spring, 8 buffalo calves have been reported: 4 at Wind Cave Preserve, 3 at the Bison Range, and 1 at Niobrara Reservation.

At Niobrara Reservation, Nebraska, recently the worst winds of the year have occurred together with snow, sleet, and ice.

Warden Wesley D. Parker, of Sullys Hill Game Preserve, North Dakota, reports many swans passing over the preserve going out to feed and coming in to the big lake. Several canvasbacks are stopping on Sweetwater Lake within the refuge. On April 26 and 27, on Sweetwater Lake, the warden observed lesser scaups, greater scaups, mallards, ringnecks, 2 American mergansers, 3 red-heads, 3 pairs of goldeneyes, 3 double crested cormorants, 4 grebes, and 1 loon. The warden has 45 nest boxes placed in the trees, and a few more will be put up for tree-nesting ducks and other birds.

Congratulations are extended to Mr. and Mrs. Frank H. Rose, of the National Bison Range, on the birth of a son.

## IMPORTATIONS

Shipments of quail from Mexico continued to arrive during the month of April, and hundreds of birds were entered daily at the port of Brownsville, Tex., up to April 21, the date of the last shipment, but the season remained open until April 30. The total number of birds imported during the season was 28,338.

Ellis S. Joseph, of Sydney, Australia, one of the largest importers of foreign birds and mammals, visited the Bureau during the month.

## MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Lawyer attended Federal court in Washington, N. C., on April 23, testifying in connection with cases obtained by him involving violations of the Migratory Bird Treaty Act while he was in the vicinity of Mattamuskeet Lake, N. C., last January. The violations consisted of killing wild geese at night. There were seven offenders, all of whom plead guilty, six being fined \$50 each and one \$5. On April 30 Mr. Lawyer made a hurried trip to Chicago and St. Paul, returning to Washington on May 4.

Warden Perry reports observing more than 30 wild deer on April 6 in a 30-acre field of oats south of Memphis, Tenn. He also reports that more than 100 wood ducks were recently observed near Sherard, Miss.

Band-tailed pigeons may be killed in California by shooting from May 15 to July 31, inclusive, when found doing damage to cherries, as a result of an order issued by the Secretary of Agriculture on April 30. The order restricts the killing of the birds, however, to persons issued permits under the order, countersigned by the chief official in charge of the enforcement of the game laws in California, permits to be granted only to owner, lessee, member of his immediate family, or bona fide employees.

On March 26 near Wallula, Wash., Warden Ransom found a pair of wild geese and the nest of these birds containing 6 eggs.

Warden Hilliard discovered a black duck's nest with 2 eggs in it along the Mullica River in New Jersey on March 31.

On a boat trip from Portland to Jonesport, Me., from March 16 to 22, Warden Smith reports seeing thousands of eider ducks. He states that it was impossible to run a boat very close to the ducks, the nearest always being two or three gunshots away.

On March 8 near Burlington, Iowa, Federal Deputy Shaw apprehended two violators in the act of killing wild ducks. These men were arraigned in Federal court at Keokuk on April 8, where they entered pleas of guilty and were sentenced by the court to pay fines of \$300 each together with costs and, in addition, to serve 15 days each in jail.

Warden Whitehead had a successful day in Federal court at Augusta, Ga., on April 22, when six persons charged with killing mourning doves during the close season were fined \$15 each and two other persons arraigned on a similar charge, \$5 each.

As a result of evidence obtained by Warden Holmes, a violator accused of killing wild ducks on March 7 in Colfax County, Nebraska, was prosecuted in State court, where he entered a plea of guilty and paid a fine of \$300, with costs in the sum of \$10.70. The accused was required to remain in jail the night previous to his arraignment.

The following appointments were made to the position of U. S. deputy game warden during the month of April:

Leo R. Childers, 1010 E. 13th Ave., Denver, Colo.  
 Charles Bernd, Delanco, N. J.  
 Arnold J. Stewart, 613 West Sixth St., Wilmington, Del.  
 Luther M. Collier, R. D. 2, Atlantic, Iowa.

The following U. S. deputy game warden appointments were terminated during the month of April:

William E. Wheeler, Falmouth, Mass.  
 Albert W. Miller, Norfolk, Va.

#### Migratory Bird Treaty Act Cases Terminated - Reports Received during April.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violations</u>	<u>Fine</u>
Baird*	3	Michigan	Selling ducks	\$50 each
Barmeier	1	Missouri	Possessing flickers and robins	\$25
Barmeier, Chilberg** & Logan**	1	Iowa	Killing ducks from motorboat	\$25 and costs of \$12.55
Birsch	3	Virginia	Killing snipe in close season	\$10 each
Birsch and Poole**	1	"	Hunting ducks from motorboat	\$5
Birsch and Walker**	1	"	Killing ducks from motorboat	\$25
" " "	1	"	Exceeding daily bag limit on sora	\$15
Bloxsom and Watson**	1	Maryland	Killing swan	\$25 and costs
Bloxsom and Kinna- mon**	1	"	Killing ducks from motorboat	\$25
Graves*	1	"	Hunting ducks from motorboat	\$25 and costs
Hoffman and Fookks*	4	Louisiana	Killing ducks in close season	\$50 each
Kelsey	6	Missouri	Killing ducks in close season	\$1 each & cost
"	7	So. Dakota	Hunting ducks after sunset	\$25 each
Lawyer	6	No. Carolina	Hunting geese at night	\$50 each
"	1	"	Hunting geese at night	\$5
Shaver	1	Minnesota	Killing a bittern	\$15

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden



<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violations</u>	<u>Fine</u>
Shaver and Turnbull**	2	Minnesota	Hunting ducks after sunset	\$10 each
Shaw*	2	Iowa	Killing ducks in close season	\$300 each and costs and 15 days each in jail
Shupee***	1	Texas	Killing snipe in close season	\$25
Smith	3	Maine	Killing sanderlings & plover	\$2.50 each
"	2	"	Killing wood ducks	\$2.50 each
"	2	"	Hunting ducks from motorboat	\$2.50 each
"	1	"	Hunting ducks after sunset	\$2.50
Steele, R. C.	3	Washington	Hunting ducks after sunset	\$25 each
"	1	Oregon	Possessing ducks in storage in close season	\$10
Steele, R.C. and Marco**	3	Washington	Hunting ducks after sunset	\$25 each
Thrasher*	2	Missouri	Killing ducks in close season	\$50 each
Tonkin and Gramse**	1	Oregon	Possessing ducks in close season	\$1
Tonkin and Loughery**	3	"	Possessing ducks and geese in storage in close season	\$10 each
Tribou*	1	Massachusetts	Hunting ducks prior to half an hour of sunrise	\$1
Visart -	5	Arkansas	Causing ducks to be shipped in close season	\$10 each and costs
"	6	"	Purchasing ducks	\$5 and costs or a total of \$16.40 each
Whitehead and H.G. Rowland*	2	Georgia	Killing doves in close season	\$5 each
Whitehead and H.G. Rowland*	6	"	Killing doves in close season	\$15 each

\* U. S. Deputy Game Warden

\*\* Deputy State game warden

\*\*\* Former U. S. Game Warden

## Cases Reported for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Birsch	3	Virginia	Killing snipe in close season
Birsch and Creighton*	4	"	Killing snipe in close season and sandpipers and waxwings
" " "	3	Maryland	Killing ducks from a motorboat
Birsch and Farnham	1	North Carolina	Exceeding bag limit on geese and brant
Folck*	1	Iowa	Killing duck in close season
Hoffman and Fools*	4	Louisiana	Killing duck in close season
Merrill and Scholler*	1	Illinois	Hunting duck in close season
Pacetti	1	Florida	Selling jacksnipe
"	1	"	Possessing a blue heron
Perry	1	Mississippi	Killing wood ducks
Riddick	1	Texas	Killing doves in close season
"	1	"	Killing swan
Scholler*	1	Illinois	Hunting ducks in close season
Steele, O. D., and Cooney*	2	Iowa	Possessing ducks in close season
Steele, O. D., and Cooney*	2	"	Killing ducks in close season
Steele, O. D.	2	"	Killing ducks in close season
Steele, R. C.	1	Washington	Possessing ducks in storage in close season
" " "	18	Oregon	Possessing ducks in storage in close season
Visart	5	Arkansas	Causing ducks to be shipped during the close season
"	6	"	Purchasing ducks
Whitehead	1	Georgia	Killing robins
"	1	"	Selling doves

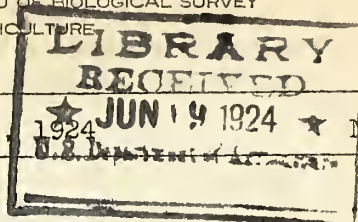
\* U. S. Deputy Game Warden

\*\* Deputy State game warden

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# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE



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No. 6

## GENERAL NOTES

Mr. Henderson left Washington on May 24 for Seattle, Wash., stopping en route at the National Bison Range, Montana, where extensive improvements for the betterment of grazing conditions of the big game animals on the range are under way. From Seattle he sailed for Nome, Alaska, on June 1, and will spend about three months in the Territory, visiting a number of localities and giving special attention to the reindeer industry, the fur bearers, game conditions generally, and other matters connected with the upbuilding of these resources. Some of the points he will visit include the head of Kotzebue Sound, Port Clarence, Golofnin Bay, Unalakleet, St. Michael, and the head of Hooper Bay, then up the Yukon to Kokrines near Ruby, and then to Fairbanks. Leaving Fairbanks, he will visit the McKinley National Park, where an effort is being made to trap caribou. He will then proceed to Anchorage and other points on the Kenai peninsula, and will stop at Juneau on his return trip.

The President's Outdoor Recreation Conference, held at the National Museum on May 22, 23, and 24, had a large attendance, and the Biological Survey was well represented at the various sessions. Dr. T. S. Palmer and Dr. H. C. Oberholser were made members of the Committee on Birds, and Dr. Nelson, Mr. Lawyer, and other members of the staff assisted in an advisory capacity in various matters connected with the conservation of birds and game.

Two of the measures enacted during the last few days of the session of Congress which adjourned on June 7 were the resolution transferring to the Department of Agriculture the administration of the Alaska game laws, formerly in charge of the Governor of the Territory, under the Department of the Interior; and the bill providing for the creation of the Upper Mississippi Wild Life and Fish Refuge, and authorizing the purchase of lands along the river from Rock Island, Ill., to Wabasha, Minn.

During the month Doctor Nelson twice addressed audiences over the air. His first talk, broadcast on May 14 over station WCAP, was on "The National Conference on Outdoor Recreation and Its Relation to Wild Life," and the second, on May 28 over station WRC, on "The Large Game of North America."

Prince Taka-Tsukasa, a member of the Japanese House of Peers, who is touring the United States for the purpose of study, visited the Bureau on May 26. The prince, who has a wide knowledge of ornithology, wished to learn the bureau's methods of collecting and keeping records of the distribution and abundance of North American birds and the mapping of their ranges. He was especially interested in the maps showing distribution of certain of our species which are closely related to those of eastern Asia, and asked to see maps of



some of our rarer species, indicating a lively interest in North American birds. Information regarding bird banding activities and game laws was also given him, and he was supplied with publications of the bureau relating to birds.

The Biological Survey was represented at the Fourth National Conference on State Parks, at Gettysburg, Pa., May 26-28, by Dr. T. S. Palmer, in charge of Importations, and Geo. A. Lawyer, Chief U. S. Game Warden.

The following publications of the Bureau were issued in May:

- "Instructions for Banding Birds," by Frederick C. Lincoln. Miscellaneous Circular No. 18. Received May 17.
- "Canaries: Their Care and Management," by Alexander Wetmore. Farmers' Bulletin No. 1327, revised. Received May 19.
- "Breeding, Feeding, and Other Life Habits of Meadow Mice (Microtus)," by Vernon Bailey. Journal of Agricultural Research, vol. 27, no. 8. Received May 23.
- "Regulations for the Protection of Game in Certain Localities in Alaska." Service and Regulatory Announcement No. 59. Received June 2.
- "Regulations for the Protection of Land Fur-Bearing Animals in Alaska." Service and Regulatory Announcement No. 60. Received June 2.

Among manuscripts submitted for outside publication in May were:

- Ashbrook, Frank G. "Fur Production on the Eastern Shore of Maryland," for The Farm Journal.
- Cole, F. R., J. R. Malloch, and W. L. McAtee. "District of Columbia Diptera: Tromoptera (Cyrtidae, Bombyliidae, Therevidae, Scenopinidae)," for Proceedings Entomological Society of Washington.
- Dufresne, Frank. "A Reindeer Roundup," for Nature Magazine.
- Goldman, E. A. "The Predatory Mammal Problem and the Balance of Nature," for Journal of Mammalogy.
- "Two New Kangaroo Rats From Arizona," for Journal Washington Academy of Sciences.
- Kellogg, Remington. "The Relationships of the Tertiary Cetaceans of Jugo-Slavia with Those of Eastern North America," for Glasnik Naucni Casopis Va Prirodne Nauke, Jugo-Slavia.
- McAtee, W. L. "Birds as Insecticides," for Holland's Magazine.
- "Good Birds and Bad Birds," for Holland's Magazine.
- Malloch, J. R. "On Some Australian Acalyptrate Diptera," for Proceedings Linnaean Society, New South Wales.
- Taylor, W. P. "Banner-tail of the Bajadas," for Nature Magazine.
- "The Breeding and Wintering of the Pallid Horned Lark in Washington State," for The Auk.
- "Cooperation Among Scientific Men," for Science.
- "Some Relations of Rodents and the Forest (Abstract)," for Science.

#### BIOLOGICAL INVESTIGATIONS

E. A. Goldman left on May 16 for Missoula, Mont., his first stop in a trip which contemplates a thorough investigation of the conditions affecting the elk in and around Yellowstone National Park, undertaken in cooperation with the

Forest and National Park Services. A side trip to the National Bison Range, to observe general conditions, has been made, as well as preparations for an examination of the Gallatin Valley, with special reference to the number of elk wintering there.

In accordance with their usual custom at this season, W. L. McAtee, Edward A. Preble, and Dr. Alexander Wetmore made an all-day bird trip, on May 12. The ground covered between daylight and dark, a continuous trip on foot, included the head and northern shore of Dogue Creek, near Mount Vernon, Va., and the country surrounding Fort Humphreys. The day was almost continually cloudy, with much rain about midday. Small birds, especially warblers, were noted as numerous and active all day. The list of species observed numbered 106, those of more or less unusual occurrence at this season including the common loon, horned grebe, and Arctic tern.

Dr. H. C. Oberholser and F. C. Lincoln made a similar trip on May 14. Their route lay through the Zoological Park and Cleveland Park to Chain Bridge and the Virginia side of the Potomac River, after which they went to Bennings Bridge and worked up the Anacostia River by boat to Bladensburg. Their combined list showed 103 species observed. The marshes of the Anacostia River were completely submerged by the flood waters of the Potomac and in consequence of the food supply that was made available, large numbers of Bonaparte gulls had gathered. A few herring and ring-billed gulls also were seen, together with some beautiful specimens of the black tern, and both species of yellow-legs.

Vernon Bailey, who has been studying the fauna and flora of several large caves near Carlsbad, N. Mex., has returned to Washington with an interesting collection of specimens and notes on habits of bats and other animals inhabiting the caves and the surrounding country. The enormous quantities of bat guano that have been taken from some of these caves for fertilizer renders them of practical, as well as scientific, interest and makes them directly useful in the field of agriculture.

T. H. Scheffer was engaged during May in studying the habits of various rodents in central and western Washington. These investigations included the capture of specimens of the native varying hare for planting on certain islands on the Alaskan Coast and studies of the seasonal activities of pocket gophers and silver-gray squirrels.

#### ALASKA INVESTIGATIONS

The Secretary on May 6 approved new regulations for the protection of game in certain localities in Alaska, and for the protection of land fur-bearing animals as well. The most important regulation in connection with game animals was <sup>that</sup> establishing a close season on all game in the Lower Taku River district, the main object being to protect the moose in that section. The bag limit on moose south of latitude 62° was reduced to one, and the season opened eleven days later than heretofore, September 1 instead of August 20. The most important change made in the fur regulations was closing the season on marten, and continuing the present close season on beaver. A special open season on muskrat was made from December 16 to April 30 in the part of district 2 lying



south of latitude 62° and west of longitude 141°, to include the waters tributary to Cook Inlet. The Lower Talna River district was also made a refuge reserve for all fur animals except wolves.

Fur Warden Jesse Nevill, of Ketchikan, has tendered his resignation. The vacancy will not be filled until after July 1.

Chief Fur Warden E. P. Walker made a trip to the Kodiak-Afognak Islands group the past month on fur-farming matters.

Congratulations are extended to Captain and Mr. K. C. Talmage, of Juneau, over the arrival of a son, born on April 16. Captain Talmage is master of the Bureau's sea-going power boat, "Sea Otter," which is doing patrol work in the waters of southeastern Alaska.

#### ECONOMIC INVESTIGATIONS

Hunter J. J. Williams, of Montana, made a fine record in the Highwood Mountains during April by taking an entire family of wolves, including the parents and ten pups.

Hunter W. S. Beesley made the best catch of the month in Missouri when he secured four fine adult wolves in Taney County, three of which were taken during the same week and are believed to be the only ones ranging in the section in which they were caught.

A herd of 1,100 sheep which went astray on the Laramie Plains near Medicine Bow, Wyo., in February was located by the five men who had been hunting for them after five days, and when found no damage was noted from coyotes and there were no dead sheep along the trail. According to sheepmen in the vicinity the intensive poisoning campaigns carried on by Hunter J. C. Hill during the past fall and winter have saved them from heavy losses.

The loss of three thoroughbred lambs killed by a bobcat and reported by ranchmen at Verdi, Nev., sent Hunter Sam Wiley on the trail. He caught the cat, and due to his work, the ranchmen assert that they are saved losses of two or three hundred dollars a month.

Forest Ranger Charles E. Brackett, of Big Piney, Wyo., who is poisoning coyotes in cooperation with the Biological Survey, reports that in his catch was one coyote with a collar on.

An orchardist at West Addison, Vt., on Lake Champlain, reports that he has lost 200 or 300 of his 8,000 trees this last winter by rat injury.

W. H. Mull, of Vesta Township, Kans., undoubtedly holds the record for killing more prairie dogs this season than any other man in Clark County. He has used 16 bushels of poisoned grain, enough for 129,000 prairie dogs, on the 11,000 acre ranch, and reports that now only one of the rodents is to be seen in a town a mile long and that this town will soon be no more.



H. W. Dobyns, Assistant Predatory Animal Inspector in the State of Washington, took 76 coyotes in April in 13 days.

Ben Foster, a biological assistant, submitted to our Arizona office a fully illustrated report including a diagram of a prairie-dog runway near Prescott, so excavated that it permitted the rodents to remain alive in the nest for several hours while a flood of water several feet deep passed over the village. After the flood passed the rodents all came out. The article will be published in the Journal of Mammalogy at an early date.

A summary of operations in New Mexico for the month shows that 111,698 acres of land infested with prairie dogs were treated at a cost of \$846.80 for materials, approximately three-fourths of a cent per acre. This makes it evident that at such a cost it pays the farmer and stockman to control prairie dogs.

Several of the large sheep outfits in Nevada have commended our work during the last lambing season. While there have been a few losses from coyotes and bobcats, taking the situation as a whole fewer lambs have been lost than in previous years, although not so many men were employed to guard them.

Reports from Wallowa County, Oregon, state that scores of deer have recently been found dead in the vicinity of Enterprise. Examination of the carcasses revealed the cause to be an unknown disease of the throat. A forest ranger states that the only parts affected were the neck glands, which in every instance were swollen to such an extent that the animals were unable to eat. The deputy game warden and county veterinarian are now investigating and hope to make some headway in curbing the ailment.

A large golden eagle while eating a freshly killed fawn was shot by Hunter L. Inman, of New Mexico.

The owner of a ranch at Magdalena, N. Mex., writes as follows: "I was certainly glad to have Mr. Ritchie spend five weeks with us. He did some very effective work, having killed two lions and one bear, which amounts to a great deal to my section, and I appreciate his work while here. Have been unable to raise any colts since coming here, about four years ago, and many of my calves have been destroyed, and I attributed it mostly to predatory animals. The local office at Albuquerque is doing all it can, and we hope it will be further permitted and enabled to carry this work on."

A report on the work done on a ranch of 467,300 acres, part of the Pablo Montoya Grant in San Miguel County, New Mexico, shows that approximately 20,000 acres were infested with prairie dogs last year. For the first treatment, 3,785 quarts of poisoned grain were used. An inspection this month shows that the results in some places were 100 per cent effective and in no place were they less than 95 per cent. It only required 704 quarts to treat the area this season.

Petitions from stockmen adjoining the Camp Stanley Military Reservation, Texas, requesting action in destroying wolves on the reservation, show losses from depredations of red wolves during 1923 of 240 out of 2,400 sheep and goats,

a 10 per cent loss for the year.

F. G. Ashbrook addressed the meeting of the Newark Fur Club, Newark, N. J., on June 3, on fur-bearing animal investigations by the Biological Survey. Mr. Ashbrook was elected an honorary member of the club.

#### FOOD HABITS RESEARCH

W. L. McAtee and H. L. Stoddard left during the last week in May for a short trip, in the course of which they visited a number of game farms in the Middle West and Eastern States, and had opportunity to study the methods used on modern game farms in the propagation of pheasants and quail.

E. R. Hall has been engaged since May 13 in a study of the relation of pelicans to fish in Pyramid Lake, Nevada. Mr. Hall is equipped with camping outfit and boat and motor facilities to permit his visiting various points about the lake.

#### GAME AND BIRD RESERVATIONS

Mr. Riley left on May 10 to visit various bird and game refuges in California, Oregon, Montana, Wyoming, North Dakota, and South Dakota.

A. P. Chambers, warden of Wind Cave Game Preserve, South Dakota, reports having seen within Wind Cave Park a ruffed grouse, a bird which he had never before seen so far down in the southern hills of South Dakota.

We are informed by Warden C. M. Conger, of Conconully Bird Refuge, Washington, that the first young mallard ducks were seen at that refuge on the morning of June 1, and reports a number of sand snipes there. As there are few ducks on the refuge the hatch is likely to be light this year. A scarcity of water is reported at the refuge.

Warden George M. Benson, of Lake Malheur Bird Refuge, Oregon, reports that the lake is lower than he has ever seen it. In April, fires started in the vicinity by settlers trying to clear their meadows, and by other persons, unknown, were spread by high winds, and resulted in the most destructive fire which has occurred during the period of his wardenship (which began in 1918). This started near Narrows on April 21, and was thought to have been extinguished by the morning of April 22, but, later, broke out again and a hurricane wind swept it toward the settled part of the valley. Dams were constructed in the Blitzen River to turn the water on the burning sod, and men fought the fire until fairly exhausted in order to get it under control by the night of April 23. Fences, hay stacks, and some barns were destroyed and the loss of the hay is serious to the community because of the dry season. As no water is reaching the lake from the Silvies River and the hay meadows in the Lawen section are very much in need of water, there is likely to be a hay shortage.

It is believed that little damage was done by these fires to the nesting birds at the Lake Malheur Refuge. On May 5, the warden reported that the flooded meadows and ponds were frozen over and the gulls, ducks, and other birds

were sitting on the ice. He states that the Blitzen River is teeming with non-game fish or minnows, which attract thousands of fish-eating birds. In the locality of Burns, Oregon, there are no overflowed meadows and accordingly there is a shortage of birds there. On a portion of the refuge, about 300 glossy ibises are feeding on the meadows, the largest number seen by the warden on the refuge at any time. Egrets are seen on all parts of the reservation and about 25 pairs of black-neck stilts are nesting on the south side of the lake, a portion of the refuge where they have not been seen to nest heretofore.

Warden George M. Wilson, Belle Fourche Bird Reservation, South Dakota, writes that there are more birds on the refuge and in the vicinity than he has seen there any year since he became warden (1919). The weather there has been very cold and dry, with a snowstorm in May.

Wesley D. Parker, Warden of Sullys Hill Game Preserve, North Dakota, reports May very cold in that vicinity and crops very late. He stated that on May 31 the surrounding country had the appearance of a month earlier. At this preserve goldeneye ducks, mallards, redheads, grebes, and teals are remaining on Sweetwater Lake, and a few young mallards have been hatched.

The first birds came to Tortugas Keys Bird Refuge, Florida, on April 24, and the first egg was seen on the 26th.

More mallards and pintail ducks are at Chase Lake Bird Refuge this year than have been seen there before, according to a report by Warden Jenkin.

Unusual weather conditions have prevailed at Niobrara Reservation, Nebraska. On the night of May 23, a heavy frost killed vegetation and fruit in a large section of eastern Nebraska, establishing a record for late frost. Fred M. Dille, warden of the Niobrara Reservation, reports no rains and very high winds for many weeks.

The season has been dry and very cold also at the Wind Cave Preserve, South Dakota.

At the Elk Refuge during the month of May, the days have been warm and the nights cold, and a great deal of wind from the south has evaporated all moisture and injured all growth on the lands that were not being irrigated. On May 27 about two inches of snow fell, which soon melted and was followed by a rain which greatly benefited the crops and pasture lands.

Gerrit P. Wilder, warden of the Hawaiian Islands Bird Reservation, visited Pearl and Hermes Reefs, Laysan Island, and French Frigate Shoal, within the reservation, and also the Midway and Ocean Islands in the vicinity, from April 24 to May 12. The trip was made on the U. S. Mine Sweeper "Pelican" through the courtesy of Commander Rodgers. He reports terns, gannets, and frigate birds numerous, and albatrosses there in great numbers.

F. W. Triska, assistant warden of the Wyoming Elk Refuge, has resigned, effective May 15, 1924.



Perry E. Wetmore, warden of the Tampa Bay Group of Refuges, Florida, has resigned, and Harold P. Bennett has been appointed in his place.

#### IMPORTATIONS

Among the mammals imported during the month of May were three young elephants and two Malayan paradoxures, brought in at New York from Hamburg, Germany. Permits for the importation of 190 eggs of game birds were also issued during the month.

W. De Witt Miller, of the American Museum of Natural History, New York City, has taken charge of inspections of foreign birds at the port of New York for the remainder of the calendar year, relieving B. S. Bowdish, who has made the inspections during the past six months.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Talbott Denmead, Deputy Chief Game Warden, addressed the Philadelphia County Fish, Game, and Forestry Association in session at Philadelphia, Pa., on May 6, on the work of the Biological Survey, with special reference to protection of migratory birds. On May 15 and 16, Mr. Denmead attended and addressed the convention of the National Association of Fisheries Commissioners, in Baltimore, Md., speaking on the destruction of waterfowl from oil pollution.

Warden Bloxsom reports seeing on May 20 at the northern end of Smith Island, Va., and near Little Inlet, two flocks of robinsnipe so large that it was impossible to estimate their numbers. Mr. Bloxsom states that the flocks looked like an immense bed of oysters, as they literally covered the shores along the surf on either side of Little Inlet. In talking with Captain Doughty, of the Coast Guard, he learned that the latter had not seen so many robinsnipe in that section in 20 years. Mr. Bloxsom adds that he also has seen more turnstones and dowitchers this year than at any other time during the past 15 years.

We are glad to announce that Warden Linebaugh was able to resume active duty on May 12, after an illness of several months.

In a bird-house contest recently conducted in the public schools of Baker, Oreg., Campbell Vermillion, ten years of age, was awarded a pair of homing pigeons by Federal Game Warden George Tonkin for being the first successful contestant to attract a pair of birds (other than English sparrows) to make their home in a bird house of the participant's own construction.

Deputy Warden John T. Capps, of Back Bay, Va., reports observing more Wilson snipe during the past spring than for several years. From another section of the country (Oregon), Warden Tonkin reports that ducks and geese are more numerous than for years, nesting in places where they had not been known to nest before.

Eighteen persons, charged with hunting wild ducks after sunset, were arraigned in the Federal court at Aberdeen, S. Dak., on May 13 and entered pleas

of guilty to violating the Migratory Bird Treaty Act, paying a fine of \$25 each. The evidence in connection with these violations was submitted by Warden Kelsey.

B. G. Merrill, Hinsdale, Ill., resigned as U. S. game warden, effective May 15.

The following appointments were made to the position of U. S. deputy game warden during May:

Ellis M. Weaver, Woodruff, Wis.  
 Richard T. Jones, Phillis, Va.  
 Robert J. Cavanagh, 1206 Borland Bldg., Chicago, Ill.  
 David N. McLean, 605 N. Monticello Ave., Chicago, Ill.  
 Wakefield Dort, 2273 Woolworth Bldg., New York, N. Y.  
 Harry L. Walrath, Orofino, Idaho.  
 Joseph Cepak, 2813 So. Spaulding Ave., Chicago, Ill.

#### Cases Reported for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	2	Missouri	Possessing ducks in close season
Barmeier	2	Missouri	Killing a duck in close season
Barmeier and Maitland**	1	"	Possessing ducks in close season
" " "	3	"	Hunting ducks in close season
Barmeier and Thrasher*	1	"	Killing ducks in close season
Berghoff*	1	"	Killing ducks in close season
Birsch	7	Nc. Carolina	Killing ducks in close season
Brickner** and Nordin**	1	Minnesota	Possessing ducks in close season
Creech* and Heller*	1	Illinois	Killing ducks in close season
Fleming* and Randall**	2	Indiana	Killing ducks in close season
Heller*	1	Missouri	Killing ducks and snipe in close season
"	1	"	Killing snipe and yellowlegs in close season
"	2	Illinois	Killing ducks in close season
Kelsey	1	So. Dakota	Killing gulls
Kelsey and Shaver	7	Missouri	Hunting ducks in close season
" " "	4	"	Possessing ducks in close season
McCarley*	2	Florida	Killing ducks in close season
Magbee*	1	Georgia	Shooting at robins
"	2	"	Killing robins
Mestel*	3	Illinois	Hunting ducks in close season
Petree*	3	New Mexico	Killing ducks in close season
Riddick	3	Texas	Killing ducks in close season
"	4	"	Killing doves in close season
"	24	"	Killing robins
Riddick and Sammons**	1	"	Possessing sandpipers
Stadlmeir and Harrington*	1	R. I.	Killing a goose in close season
Steele, R. C.	1	Oregon	Possessing ducks in storage in close season

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

Tonkin	8	Utah	Possessing ducks in storage in close season
"	9	Idaho	Possessing ducks in storage in close season
Whitehead and Maddox*	1	Georgia	Killing bobolinks in close season

## Migratory Bird Treaty Act Cases Terminated - Reports Received During May.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Andersen*	4	Iowa	Killing ducks in close season	\$10 each and costs
Barmeier and Maitland**	3	Missouri	Hunting ducks in close season	\$15 each
Birsch and Farnham	2	Virginia	Killing coot from motorboat	\$25 each
Birsch	1	N. Carolina	Hunting sora at night	\$5
"	6	"	Hunting sora at night	\$10 each
Bloxsom	20	Virginia	Hunting ducks after sunset	\$7.50 each
Bloxsom and Jester**	1	"	Killing curlew	\$20
Bloxsom, Stevens** and Notting-ham**	1	"	Hunting ducks from motorboat	\$15
Bloxsom and Jester**	1	"	Shooting at a heron	\$25
Foolkes**	1	Louisiana	Selling ducks	\$50
Heller*	1	Missouri	Killing snipe and yellowlegs in close season	\$25
Hoffman	1	Louisiana	Selling ducks	\$5
"	2	"	Selling ducks	\$50 each
Kelsey	20	So. Dakota	Hunting ducks after sunset	\$25 each
McCarley*	2	Florida	Killing ducks in close season	\$5 each
Merrill and Sessler*	2	Illinois	Hunting ducks after sunset	\$25 each and costs
Merrill and Scholler* 1	"	"	Hunting ducks after sunset	\$10 and costs
Pacetti and McCarley*	1	Florida	Killing ducks after sunset	\$5
Pacetti and McCarley*	1	"	Killing ducks after sunset	\$10
Smith	1	Maine	Killing a blue heron	\$2.50
"	1	"	Hunting ducks after sunset	\$2.50
"	1	"	Hunting ducks after sunset	\$5.00
Shaver and Kelsey	1	Missouri	Killing ducks in close season	\$1
" " "	1	"	Killing ducks in close season	\$25
Tonkin and Gramse** 1	Oregon	Possessing ducks in close season	\$10	
Visart	1	Arkansas	Killing ducks in close season	\$15
Whitehead	1	Georgia	Killing a woodpecker	\$25

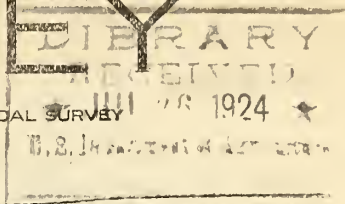
\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden



# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE



Vol. 5

Washington, D. C., July 24, 1924

No. 7

## GENERAL NOTES

On June 7 President Coolidge signed and made effective a Senate joint resolution transferring the administration of the Alaska game law from the Governor of the Territory to the United States Department of Agriculture, thereby enabling the Secretary of Agriculture to unite under the Biological Survey the administration of the Alaska game law with the one covering the land fur-bearing animals of the Territory. This will end the duplication of wardens which was necessary when the administration of the game law was under one establishment of the Government and the administration of the laws protecting land fur-bearing animals under another. Wardens enforcing both the game and the fur laws will hereafter be known as United States Game Wardens.

Mr. Henderson reached Nome, Alaska, about the middle of June and has been visiting various points along the coast where reindeer herds are located. After completing investigations about Nome he will proceed up the Yukon and continue his itinerary as outlined in The Survey of last month.

A meeting of the Business Organization of the Government was held at Continental Memorial Hall on the evening of June 30, and was attended by Dr. E. W. Nelson and several members of his staff. The President and General Lord, Director of the Bureau of the Budget, spoke and reviewed the past, present, and future financial situation of the Government. Economy and reduction in expenditures wherever possible for the present and succeeding fiscal years is the determined policy of the administration. The President has named an amount for both fiscal years to which expenditures and estimates must be restricted, and expressed his conviction that a further reduction in Government personnel could be made without detriment to the service; also that traveling expenses were entirely too high and that a marked reduction in this expense item could and should be made.

Preliminary estimates for the fiscal year 1926 have been submitted to the Secretary of Agriculture to go to the Bureau of the Budget on July 15.

The Secretary has approved, effective July 1, 1924, the plan proposed by Doctor Nelson for the establishment under the Biological Survey of a separate major unit, formerly under the Division of Economic Investigations, to be known as the Division of Fur Resources. The new division will be under the leadership of F. G. Ashbrook, who has been in charge of the work connected with the study and development of the fur-farming industry and allied subjects, including the establishment of the new experimental fur farm near Saratoga Springs, N. Y., since February, 1921. The fur-farming industry is steadily developing and should come to be recognized as a permanent branch of agriculture in its broad sense. As the land utilized for fur production is usually of little or no value for

crop growing, fostering this industry is important from every point of view. There are now about 1,200 fur farmers in the United States and Alaska, with a total investment somewhere between \$12,000,000 and \$15,000,000. The work of the new division includes the study of fur-bearing animals in captivity, of the utilization of fur, with a view to assisting in the formulation of laws to protect fur animals and maintain the supply, and of the possibility of increased production through restocking suitable areas. Relations will be established with all organizations connected in any way with the production and conservation of fur-bearing animals. This will make it possible to gather data that will establish definitely the value and importance of conserving the natural fur resources of the country.

Prof. E. C. Starks, of Stanford University, California, a member of the Biological Survey from 1897 to 1899, first as preparator of specimens and later an osteologist, was a visitor in the offices of the Bureau on July 9.

Among manuscripts submitted for outside publication in June were:

Couch, Leo. K. "The Relation of Rodent Control to Game Protection,"  
for The Murrelet.

Denmead, Talbott. "Miller's Island Ducking Club," for the Maryland  
Conservationist.

Lincoln, Frederick C. "Notes on the Bird Life of North Dakota with Particular  
Reference to the Summer Waterfowl," for The Auk.

-----"Obituary Notice Relative to L. J. Hersey," for The Auk.

-----"A 'Territory' note on the Belted Kingfisher," for the Wilson Bulletin.

Malloch, J. R. "Two New Phoridae from the Eastern United States (Diptera),"  
for Entomological News.

McAtee, W. L. "Birds in Insect Control," for The Auk.

-----"Birds in Relation to the Foot-and-mouth Disease of Cattle," for The Auk.

-----"Collinge on the Food and Feeding Habits of the Blackbird," for The Auk.

Oberholser, Harry C. "April and May Birds at Washington, D. C.," for Bird Lore.

-----"The Migration of North American Birds, XXV: Broad-billed, Rivoli, and  
Blue-throated Hummingbirds," for Bird-Lore.

Scheffer, Theo H. "Badger Diggings," "Magpies on the West Coast," "A Shrike's  
Nest," for The Murrelet.

-----"Transplanting Squirrels," for Wisconsin Magazine.

Taylor, Walter P. "The Need of a Desert Biological Station for the Study of  
Plants and Animals Together," for Ecology.

Wetmore, Alexander. "A Warbler from Nihoa," for the Condor.

#### BIOLOGICAL INVESTIGATIONS

Mr. Goldman spent the month of June and the first week of July in western Montana and northwestern Wyoming in an investigation of conditions affecting big game. In cooperation with the National Park Service and the Forest Service, an examination of the Gallatin Valley was made with special reference to both summer and winter ranges occupied by elk. Much valuable information on this phase of the elk problem was gathered. A special study was also made of the problem of disposing of surplus game on the National Bison Range.



Dr. Walter P. Taylor, assisted by Gilbert Sykes, was occupied during June in an investigation of the relation of rodents to forestry, with special reference to the problem of reforestation. Headquarters were maintained at the Southwestern Forest Experiment Station, near Flagstaff, Ariz. In connection with this investigation additional work was carried on at the experimental plots at Williams and Seligman.

Theo. H. Scheffer has continued investigations on the relation of rodents to agriculture and horticulture in western Washington and has also continued efforts to secure living specimens of the Washington varying hare for stocking islands in southeastern Alaska.

Frederick C. Lincoln left Washington on July 8 to carry on banding operations in the colonies of gulls and terns in the vicinity of St. James, Mich. It is designed also to make an examination of the sites of certain lighthouse reservations with a view to their possible creation as bird refuges. The examination of these sites is made possible through the cooperation of the Bureau of Lighthouses.

Dr. H. C. Oberholser left Washington on July 9 to attend the Conference on Conservation at Boulder, Colo. He will also represent the Bureau at the annual session of the American School of Wild Life Protection, at McGregor, Iowa, August 3 to 16.

#### ALASKA INVESTIGATIONS

The Cook Inlet Silver and Blue Fox Breeders' Association has been recently organized with headquarters at Seldovia.

Seven islands off the southern coast of the Territory which are used under the jurisdiction of the Bureau for the propagation of foxes, have been released to the present lessees.

Elmer T. Forsling, who has been field assistant to L. J. Palmer, in charge reindeer grazing investigations, with headquarters at the Reindeer Experiment Station, at Nome, has tendered his resignation effective September 17, 1924. Mr. Forsling will return to the States to continue a university course.

Lillian I. Kay, who has been a part-time clerk in the Bureau's Juneau office, has been appointed a clerk at full time, and will act as office assistant to E. P. Walker.

A change in the titles of the fur wardens in Alaska has been made, and all Bureau representatives in Alaska connected with the enforcement of the game and fur laws, with the exception of Chief Fur Warden Walker, will hereafter be known as U. S. Game Wardens. Mr. Walker's official title will be Chief Alaska Game Warden.

Frank Dufresne, of Nome, during the month of April, seized a total of 255 muskrat skins, 2 red fox skins, and 1 mink skin. The muskrat and mink skins were seized on the ground of having been trapped out of season, while the fox



skins showed that the animals had been poisoned. All from whom the skins were seized by the warden signed "releases" of ownership of the skins after seizure. The party killing the mink received a suspended sentence of 20 days in jail, but paid the costs of \$9.75. The others were not prosecuted, the loss of the skins being considered sufficient punishment.

One of the largest seizures of skins of land fur-bearing animals made in the Territory for some years is reported by Walter C. Denny, fur warden at Fairbanks, who on April 22 seized a total of 900 muskrat skins from residents of Nenana, who are charged with trapping muskrats out of season. The skins are now in the possession of the United States Marshal at Fairbanks, and will be held as evidence for the trial at the fall term of Federal court at Fairbanks.

### ECONOMIC INVESTIGATIONS

Inspector Lindley, of Texas, was successful during the month in destroying 31 wolf pups in five dens and in killing three adult female wolves. One of the three was particularly notorious, having raised pups in the same vicinity for 4 years and destroyed many sheep and goats. The pups only were captured in former years.

Joseph Keyes made a special trip in Mendocino County to the holdings of the Union Lumber Company of California, upon request, to investigate damage by rodents to redwood and Douglas fir seedlings upon replanting areas. Some 500 acres of cut-over lands have been replanted during the present season at a cost of about \$12 per acre. The damage by rodents to date was placed at 15 per cent.

Hunter Dave Crouch killed an old female mountain lion in the Parkdale country west of Canon City, Colo., in May. This is one of the outstanding features of the work of the month, as this particular lion was preying on the only band of mountain sheep in this locality.

Pocket gophers are responsible for a break in the main canal on the Sunnyside Irrigation project, near Yakima, Wash., which washed out 40 feet of the canal and flooded a large area. A crew of 75 men was engaged in repairs, working day and night because of the need of irrigation water.

An extensive range on the high desert east of the Warner Valley used to be a Mecca of fur trappers and bounty hunters, being considered one of the "best" coyote sections in Oregon. This range was thoroughly poisoned last winter, and up to May 18 not a single sheep from the local outfits had been killed by predatory animals. A thorough inspection of the range by Assistant Inspector Williams disclosed very few signs of bobcats or coyotes.

Because of field mice, a farmer in Texas has been unable to get a stand of peanuts for the last few years, losses occurring within a day or two of planting. Two batches of five quarts of seed peanuts were treated by Mr. Whitehead, one with the standard strychnine and starch preparation, and the other with a solution of one part creosote dip to 3 parts pine tar. One scant tablespoonful of the creosote-pine-tar solution was used to one quart of peanuts. Upon inspection after ten days, Mr. Whitehead found that the peanuts had sprouted with-

out being molested, and that in spite of a couple of showers the poison paste was found still effective. The repellent creosote-pine-tar solution is, of course, more economical in driving the mice from the seeds, though the strychnine coating would evidently kill them.

George Rogers, a deputy State game warden, of Wallowa County, Oreg., reports that there is a marked decrease of coyotes in that section and that although he has spent most of the past year in the mountains and on the stock range he has seen only one live coyote. He states that evidence of the decrease in predatory animals is shown in the enormous increase in grouse throughout his territory.

Hunter Wm. Krepps heads the list of best catches made in the month in Colorado. He can imitate the call of the adult coyote so well that when he discovers the parent coyote close to a den he hides near by and calls the animal within rifle shot.

Hunter Carrell, in making his round of trap lines in the San Luis Valley, Colorado, discovered the nest of a mallard duck that had been partly destroyed by a badger. The eggs apparently had been just about ready to hatch. Since this area is becoming quite a nesting ground for wild ducks it is more than likely that there is considerable destruction of duck eggs by badgers.

Rapid progress was made in the Columbian ground squirrel campaign during May in Washington, with the use of calcium cyanide. By June 1 about 227,000 pounds of the poison had been distributed in eastern Washington and northern Idaho, 132,000 pounds of which was sold by Whitman County to farmers.

With the appearance of rabies among dogs and coyotes in the San Luis Valley, Colo., 10 hunters were sent to the section to suppress the disease, in a cooperative undertaking between the six valley counties, the State Board of Stock Inspection Commissioners, and the Biological Survey.

Two flower growers of Olympia, Wash., report that moles and mice are responsible for the loss of 500 flower bulbs this spring. The loss was recently noted when the bulbs were dug for transplanting. Since the damage is usually done in the winter and early spring, it is ordinarily not discovered until too late to apply preventive measures.

An unusually large wolf was captured in the Porcupine Mountain District, Mich., during the month by Hunter Ioshaw, who states that while he has caught nearly 500 wolves in Michigan, this one is by far the largest, weighing about 130 pounds.

While Inspector Jewett was in Lakeview, Oreg., an operator along the California-Oregon line told him that he had been pasturing ewes and lambs on the floor of the valley for the past twelve years and that until this year because of bobcats and coyotes he had had to put them in sheds every night. He said, however, that during the past thirty days or more these ewes had been in the pasture continuously and not in corrals or sheds, and that not a single ewe or lamb had been molested by a predatory animal. He attributes this state of



affairs entirely to the fact that his own and neighboring ranges were thoroughly poisoned by Hunter John Lewis during the spring.

A trip was made recently by Leo K. Couch, Washington district leader, to Smith Island, to investigate rabbit conditions. It was found that domestic rabbits introduced on the island twenty-five years ago had increased to thousands. They have burrowed extensively and eroded the island badly in places, and are rapidly destroying a small tree area by girdling. Native grasses are practically gone, as the rabbits dig up the roots in dry weather. They do not seem to touch the tarweed and bracken fern which cover the island. Most of the buildings and the water tower are said to be endangered by rabbits burrowing under the foundations. It is planned in August or September to kill the rabbits through establishing poison stations.

Seven years ago a rancher near Greenville, Tex., received an old prairie dog and four young ones from Archer County. These have spread until now they cover an area of 15 acres of pasture land. Three hundred and ninety-two holes were counted recently, and from 4 to 5 young prairie dogs were observed about the mounds of 60 per cent of the holes of the town.

Inspector Musgrave recently destroyed an old female wolf that came at night to try and coax away the dogs of a rancher in southern Arizona. This wolf was poisoned within thirty feet of the front door of the ranch house.

#### FUR RESOURCES

Dr. D. E. Buckingham, of Washington, D. C., was appointed assistant biologist on July 1, 1924, to make a two months' tour of inspection of fox farms in Southeastern Alaska from the Juneau district in the north to the Ketchikan district in the south. The main objects of the trip are to study methods of conducting the fox farms and to investigate the prevalence of diseases of blue foxes due to parasitic or bacterial infection, and local methods of treatment and control of parasites and diseases. Doctor Buckingham left Washington on July 8 for Seattle, from which place he will go to Juneau to join Ernest P. Walker, Chief Alaska Game Warden, and arrange for his inspection of the fox farms. This is a reconnaissance trip and will lay the foundation for more detailed work later on. Most of the travel will be on the Sea Otter, a government-owned boat.

Mr. Ashbrook during the past month has twice visited the Experimental Fur Farm at Saratoga Springs, N. Y., the first visit being for the purpose of planning construction work to be undertaken this coming year. He found that the young foxes born this spring are doing very well. The second trip was made in company with Dr. D. E. Buckingham, in order that the latter might become acquainted with the work being carried on at the experimental farm. Mr. Ashbrook and Doctor Buckingham, in company with Doctor Hanson, who is in charge of the fur farm, visited a number of silver fox ranches in the general region about the experimental farm.

The marriage is announced of Mr. Frank G. Ashbrook and Miss Caroline McKinley on July 14, in New York City. Congratulations and best wishes are extended.



## FOOD HABITS RESEARCH

W. L. McAtee and H. L. Stoddard returned early in June from their trip to leading game farms in Illinois, Massachusetts, New York, and Pennsylvania. Data and photographs were secured which will be used as the basis of a publication on pheasant rearing.

On his return trip to the headquarters of the quail investigation at Beachton, Ga., Mr. Stoddard stopped off in Atlanta to visit the State Game Warden. He found that official much interested in the work and was assured of cooperation.

E. R. Kalmbach has been in Louisiana the past few weeks. From Crowley as a center, he inspected damage to rice by blackbirds and discussed with interested persons the possibilities of an extensive campaign against the birds. Working in and about Tallulah Mr. Kalmbach has been investigating reported destruction of birds by poisoning operations in cotton fields.

C. C. Sperry studied the economic status of gulls on the Eastern Shore of Virginia during the month. Reports of damage proved to be almost without foundation and evidently were inspired by a desire for renewal of egging privileges.

Wayne E. Manning, appointed during the month, began an investigation of the drained area in the Kankakee region of Indiana, the object being to obtain authentic data relative to the success of the undertaking in reclaiming land of value for agriculture, and upon the effect of drainage upon wild fowl, fur bearers, and other wild life.

## GAME AND BIRD RESERVATIONS

Warden Almer P. Nelson, of the Elk Refuge, Wyoming, reports the entire month of June there as very dry and dusty and unfavorable to growing crops. The hay crop will be far short of normal and unless heavy rains soon occur the grain crop may be a total loss. The grass on the foothills in the vicinity is fast drying up, as the result of which fall pasturage will undoubtedly be much less than usual. The extremely dry weather has driven ground squirrels in great numbers from the higher lands down to the irrigated sections.

Two sandhill cranes have nested on the Elk Refuge this season, for the first time to the knowledge of the warden.

After a long period of drought, heavy rains occurred in June in the locality of Niobrara Reservation, Nebraska, making it impossible on some days to proceed with outdoor work. Warden Fred M. Dille reported early in the month that the country was water-soaked and that the most severe hailstorm (amounting almost to a cyclone) that he had ever seen occurred on June 14. Three areas were devastated by the hail, which was severe enough to destroy all birds' nests, young birds, and rabbits in those localities.

Warden L. L. Bryan, of Big Lake Reservation, Arkansas, reports a fine lot of young mallards on the refuge. Low water has been of great benefit to the ducks that have been raised on the refuge this season, and if there is not too much rain and resultant high water later on, there will be abundant food for the birds.

The fire that started in April, which resulted in the burning over of a big area on the southern border of Lake Malheur, Oregon, destroying much hay and pasture, fences, and some barns, after smoldering for some weeks, broke out again the first week in June. Efforts were made to get it under control, but owing to an insufficient fire-fighting force and a changeable high wind it spread on June 11 and, for four days, going east and west, burnt everything in its path. Men and teams worked day and night in an endeavor to control the flames, with the smoke and ashes so thick at times that it was difficult to see or breathe. A patrol has been maintained since June 14 and whenever a fire is seen a man with a team and barrels of water is rushed to the place. The fire covered an area about eight miles long by one-fourth to three miles wide. The original fire which started in April was said to have been of incendiary origin. It has been disastrous for the ranchers located on the border of the lake.

Warden Ludwig Bethel, of Tortugas Keys Bird Reservation, Florida, reports a slight decrease there in the number of sooty terns and a moderate increase in the number of noddies. The first young bird at the refuge was seen on June 1.

Blue grouse are reported rather scarce in the vicinity of the Conconully Bird Reservation, Washington, this season, but prairie chickens, Chinese pheasants, Hungarian pheasants, and ruffed grouse are plentiful. Warden Charles M. Conger states that there are about eight head of deer using the bottomlands on this reservation.

More song birds are reported at Sullys Hill Game Preserve, North Dakota, than for many years at this season. Gold finches, chickadees, grosbeaks, phoebes, orioles, and kingbirds nested at the preserve, besides many other birds of commoner species. Twenty-six young mallards and six young goldeneye ducks were on Sweetwater Lake within the preserve.

Warden B. J. Pacetti, of Mosquito Inlet Bird Reservation, Florida, writes that weather conditions there have been excellent for a good hatching season, as the birds nested late and no high winds or cold rain storms have disturbed them. A larger number of birds are nesting on Pelican Island than for two years, and only one dead young bird has been seen there this season by the warden. There are more skimmers and least terns in the vicinity than have been there for many years and they are nesting well, though disturbed somewhat by persons going among them.

#### IMPORTATIONS.

Margaret W. Wythe, of the Museum of Vertebrate Zoology, Berkeley, California, was appointed temporary inspector of foreign birds and mammals at the port of San Francisco, Calif., effective May 31. This is the first time in the history of the Bureau that a woman has been appointed to make inspections of foreign birds and mammals at any port in the United States.

Richard Hunt, of the Museum of Vertebrate Zoology, has also been appointed a temporary inspector at San Francisco.



In a recent shipment which arrived at San Francisco from Manila, there was a loss in transit of 80 out of 480 bleeding heart doves and 600 out of 1,000 weaver birds, including black-headed muns and spice finches. This is the highest mortality reported for some time. The mortality among imported cage birds as a rule is very low, usually less than 5 per cent.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

George Neale, executive officer of the California Board of Fish and Game Commissioners, was a visitor in Washington during the week of May 25 to 31. Mr. Neale stopped over en route to New York where he sailed for several months' sojourn in Europe.

Mr. Lawyer was in New York City on official business on June 27.

The annual poster on the open seasons for game for the season 1924-25 was issued in June. The edition consisted of 16,500 copies, distribution of the greater part of which has already been accomplished.

The Bureau is in receipt of a report from Messrs. Stuart J. Flintham, S. D. Turner, and O. M. Thurston, U. S. deputy game wardens in Los Angeles, Calif., which indicates that these cooperators performed splendid work during the fiscal year ended June 30, 1924. They obtained 23 cases involving violations of the Migratory Bird Treaty Act, prosecuting them in the State court and obtaining convictions in 20.

The sixth conviction for hunting ducks from an airplane was obtained in the Federal court at Tacoma, Wash., on June 17, 1924, when the accused, charged with this means of hunting, entered a plea of guilty and paid a fine of \$25. This case was obtained by Warden Ray C. Steele.

For shipping partridges from Maine to New York contrary to State law and in violation of Section 4 of the Migratory Bird Treaty Act, a violator was arraigned in the Federal court at Bangor, Me., at the June term, entered a plea of guilty, and was fined \$200. The accused had previously been prosecuted in State court, where he paid a fine of \$200 and costs. The evidence was obtained by Federal Wardens George E. Cushman and B. E. Smith.

A fine of \$100 and costs amounting to \$10.85 was the punishment meted out in the Federal court for the Western District of Missouri upon arraignment of a violator charged with the killing of one wild duck during the close season. Federal Wardens Barmeier and Thrasher secured the evidence against this offender.

Robert Bain, 301 West 39th St., Austin, Tex., was appointed U. S. deputy game warden, effective June 16.



Migratory Bird Treaty Act Cases Terminated - Reports Received During June.

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Andersen***	1	Illinois	Killing coot from motorboat	\$10 and costs
"	1	"	Killing a wood duck	\$15 and costs
Rabson*	1	Massachusetts	Killing loon	\$1
Backus*	3	"	Killing wood ducks	\$5 each
Sarmeier	1	Missouri	Possessing ducks in storage in close season	\$1 and costs
"	1	"	Hunting ducks from motorboat	\$50
" and Heller*	2	"	Hunting ducks from motorboat	\$25 each
" " Thrasher*	1	"	Killing ducks in close season	\$100 and costs of \$10.85
Birsch and Creighton*	1	Maryland	Hunting ducks from motorboat	\$10 and costs
Charlton and Swope**	1	Ohio	Killing dove in close season	\$25 and costs
Concannon*	2	Kansas	Killing ducks in close season	\$5 each
Creech* and Heller*	1	Missouri	Hunting ducks in close season	\$25
Ehlers*	1	Indiana	Killing duck in close season	\$10 and costs
Ehlers* and Bauman**	2	"	Killing ducks from motorboat	\$10 each
Folck*	2	Iowa	Hunting ducks in close season	\$20 each and costs
Greiner*	1	"	Hunting ducks in close season	\$10 and costs
Hilliard	1	New Jersey	Hunting ducks after sunset	\$10
" and Pierce*	1	" "	Hunting ducks after sunset	\$25
Hoffman	1	Louisiana	Selling ducks and snipe	\$50
Kelsey	1	Iowa	Selling ducks	\$1 and costs
"	1	"	Selling ducks	\$10 and costs
Linebaugh	2	Kentucky	Hunting doves in close season	\$1 each
" , Blackwell**	1	Indiana	Selling and serving duck	\$25 and costs
and Boone**				
Lowe*	1	Massachusetts	Killing sandpipers	\$1
Mecarta*	2	"	Killing sandpipers	\$1 each
Merrill*** and Scholler*	1	Illinois	Hunting ducks in close season	\$25
Merrill*** and Scholler*	2	"	Possessing ducks in storage in close season	\$25 each
Merrill*** and Sessler*	2	"	Hunting ducks after sunset	\$10 each and costs
Miller***	2	Maryland	Hunting ducks in close season	\$25 each and costs
Naylor**	1	Massachusetts	Killing a grebe	\$1
Pacetti	2	Florida	Killing ducks from motorboat	\$5 each
Perry and Visart	1	Arkansas	Possessing ducks in storage in close season	\$20
Riddick	4	Texas	Killing doves in close season	\$10 each
Sellers*	1	Louisiana	Killing coot in close season	\$25
Shaver	1	Minnesota	Possessing ducks in storage in close season	\$25
Shoemaker* and Swanson**	1	Iowa	Hunting ducks in close season	\$10 and costs
Smith	2	Maine	Killing ducks in close season	\$10 each
" and Cushman*	1	"	Transporting partridges interstate contrary Sec. 4	\$200

tadlmeir	1	Rhode Island	Killing sandpipers	\$45
"	1	" "	Killing sandpipers	\$17.50
teele, R. C.	1	Washington	Hunting ducks from airplane	\$25
" " " and Meier*	1	"	Hunting ducks after sunset	\$20
teele, R. C.	1	Oregon	Possessing ducks in storage in close season	\$5
" " "	17	"	Possessing ducks in storage in close season	\$10 each
" O. D. and Cooney*	1	Iowa	Killing ducks in close season	\$20 and costs
onkin	2	Utah	Possessing ducks in storage in close season	\$10 each
isart	1	Arkansas	Killing ducks in excess of bag limit	\$10
"	1	"	Hunting ducks in close season	\$20 and costs of \$11.40

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Former U. S. Game Warden

#### Cases Reported for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier and Maitland**	3	Missouri	Killing ducks in close season
Beloat** Cook** and Ehlers	1	Kentucky	Hunting ducks in close season
Bloxsom, Nottingham** and Stevens**	3	Virginia	Killing ducks and brant in close season
Bloxsom and Stevens**	1	"	Killing turnstones and plovers
Clark* and Marmouget**	2	Louisiana	Selling ducks
Creech* and Heller*	1	Missouri	Hunting ducks in close season
" " "	4	"	Killing ducks and snipe in close season
Heller*	1	"	Possessing ducks in close season
" and Mestel*	1	Illinois	Hunting ducks in close season
Linebaugh and McQuillen**	1	Kentucky	Killing ducks in close season
Merrill*** and Scholler*	1	Illinois	Possessing ducks in storage in close season
Mestel*	1	Illinois	Killing ducks in close season
Richardson**	1	California	Killing geese in excess of bag limit
Riddick	1	Texas	Killing coot in close season
Riddick	1	"	Shipping ducks interstate contrary to Section 4
Shaver	3	Minnesota	Hunting ducks after sunset
Steele, O.D., DeVries** and Van De Meide**	1	Iowa	Killing ducks in close season
Steele, O. D.	2	"	Killing ducks in close season
" " "	1	"	Killing yellowlegs in close season
onkin	1	Oregon	Killing ducks in close season
isart	2	Oklahoma	Killing coot in close season

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

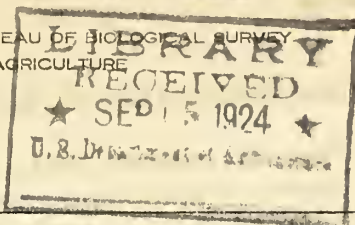
\*\*\* Former U. S. Game Warden





# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE



Vol. 5.

Washington, D. C., August 26, 1924.

No. 8

## GENERAL NOTES

Doctor Nelson has returned from a two weeks' trip to New York, where he inspected the Bureau's Experimental Fur Farm near Saratoga Springs and also other fur farms in the Adirondacks. During his absence he enjoyed a few days' vacation in a camp on the border of one of the beautiful Adirondack lakes.

On August 4 a radiogram from Mr. Henderson at Nome reported his return from a visit to reindeer herds on the shores of Kotzebue Sound and in the valley of the Kobuck River. He planned to leave at once to join the Biological Survey party which is banding wild fowl at the head of Hooper Bay, south of the Yukon Delta. From this point he proceeds up the Yukon and Tanana Rivers to Fairbanks, stopping at one or two points to inspect reindeer herds.

The sympathy of the Bureau is extended to Mr. Riley, in charge of Reservations, in the death of his mother, Mrs. Virginia Smith Riley, of Gersham, Montgomery County, Md., on August 3.

Among publications submitted for outside publication in July were:

- Ashbrook, F. C. "The Work of the United States Department of Agriculture Relating to Fur-Bearing Animals," for the Fur Trade Yearbook.
- Couch, Leo K. "Storing Habits of Microtus townsendii," for Journal of Mammalogy.
- Jewett, Stanley G. "The Red-eyed Vireo as a Bird of Oregon," for The Condor.
- McAtee, W. L. "Do Bird Families Have Any Permanency?" for The Condor.
- Oberholser, Harry C. "June and July Birds About Washington," for Bird Lore.
- Oman, A. E. "Fighting the Pocket Gopher, the Prairie Dog, and Other Rodent Pests," for publication by the Kansas State Board of Agriculture.
- Preble, E. A. "The Chigger or Harvest Mite," "The Great Anteater," "The Jamaican Iguana," "Spencer Fullerton Baird," "A Stranded Whale," and "Two-toed Sloth," all for Nature Magazine.
- Scheffer, T. H. "Notes on the Breeding of Beavers," for Journal of Mammalogy.
- "The Pacific Coast Mole," for Fur Farmer Magazine.
- Wetmore, Alexander. "Lava Rock and Coral Sand, Chronicle of a Scientific Expedition to Little Known Islands of Hawaii," for National Geographic Magazine.

One publication of the Bureau appeared in July:

"How to Attract Birds in the East Central States: West of Pennsylvania, North of Tennessee, and East of the One-hundredth Meridian." Farmers' Bulletin 912, revised (June).

"Breeding, Feeding, and Other Life Habits of Meadow Mice (*Microtus*)," by Vernon Bailey, formerly listed as published in the Journal of Agricultural Research, became available during the month in separate form (No. Q-1).

In the Agriculture yearbook for 1923, which has just appeared, the Biological Survey is represented by a statistical table (Table 735, p. 1198), prepared by Talbott Denmead, showing the number of hunters' licenses issued in 1922 for the season 1922-23, and the total money returns to the States therefrom, the latter aggregating \$4,884,099.50. Dr. W. B. Bell and W. L. McAtee cooperated with authors from other bureaus in the preparation of some of the exhaustive articles, furnishing information from the point of view of the Biological Survey on the relation of wild life to the sheep industry (p. 265), our forage resources (pp. 399-400), and the utilization of land (p. 505).

#### BIOLOGICAL INVESTIGATIONS

Mr. Goldman left Washington on August 10 at the request of the chairman of a committee representing organizations concerned in game protection, to join a party which will spend about two weeks studying conditions affecting deer on the Grand Canyon National Game Preserve, in order that his knowledge of the matters in hand may be available. The investigation will also cover grazing problems caused by the rapid increase of deer on that area.

The investigations now being conducted in Arizona by Dr. W. P. Taylor, in cooperation with the Forest Service, concerning the relation of rodents to the reproduction of certain southwestern timber trees, include direct studies of the preferences of porcupines and squirrels for a variety of foods, by confining these animals in a good-sized inclosure, containing seedlings, saplings, and half-grown trees. In this way, direct evidence can be obtained of the exact methods of attack and extent of daily damage by these animals.

Frederick C. Lincoln returned to Washington on August 9, after a short stay in Michigan, where he investigated several proposed bird refuges and engaged in bird banding operations, mainly in the Beaver Islands, Lake Michigan, in cooperation with W. S. McCrea, of Chicago, Ill., one of the Bureau's bird banding cooperators. About 900 bands were placed on herring gulls and Caspian and common terns. Of particular importance is the colony of Caspian terns on Little Hat Island, where 500 were banded. A large number of birds were banded at this colony last year and many interesting returns from these have already been received, among them being two from Colombia, South America. Efforts will be made to insure permanent protection for this interesting colony.



## ALASKA INVESTIGATIONS

Erwin M. Goddard, a former Territorial game warden, has been appointed United States game warden, with headquarters at Sitka.

The text of laws and regulations relating to game in Alaska has been printed in pamphlet form and is available for distribution.

A 30-foot Columbia River model power boat has been purchased for patrol work in the Cook Inlet region and will be in charge of Warden A. H. Hardy, of Anchorage.

Hugh W. Terhune has been appointed United States game warden, with headquarters at Juneau, for patrol work on the Sea Otter in southeastern Alaska.

## ECONOMIC INVESTIGATIONS

Doctor Fisher will leave for a field trip in the West beginning September 1. He will stop first at Cheyenne, Wyo., and then at Denver, Colo., after which he will go to South Dakota, North Dakota, and points in the Northwest.

S. E. Piper was recently detailed to make special investigations in Roosevelt County, N. Mex., to determine improved methods for destroying the prairie dogs. He will cooperate with A. E. Gray in this work.

H. E. Williams and E. E. Horn, of the Denver laboratory, are at present in southwestern Colorado for the same purpose. As soon as the best kind of poison has been determined, L. L. Laythe will begin poisoning operations.

F. E. Garlough, also of the Denver laboratory, has been conducting investigations in Oregon, chiefly to determine effective methods for summer poisoning of jack rabbits. Owing to the drought in Morrow County, Oreg., jack rabbits have congregated about the farming districts, where they have proved exceedingly destructive to crops. The dry weather, however, has made poisoning conditions more favorable than usual, and Mr. Garlough has ascertained that green alfalfa treated with strychnine gives very satisfactory results under these conditions. It is estimated that 50,000 rabbits had been poisoned previous to his arrival, and 75,000 additional since then.

I. N. Gabrielson, in charge of the Oregon District, reports that the work on jack rabbits is progressing well under the leadership of Roy Fugate. He also advises that, on complaint of Forest Service officials that ground squirrels were interfering with grazing studies on fenced quadrats in the Snow Mountain District of the Ochoco National Forest, the situation was investigated by A. W. Moore who poisoned these areas and cleaned up the rodents. The report of the Forest Service indicated that the grass inside



the fenced area was in much worse condition after four years than the grazing area outside, due to the activities of squirrels and pocket gophers. Mr. Moore reports that the ground squirrel population in the vicinity seems to have used the fenced areas as a safe retreat from stock and wandering enemies. The more succulent grasses within these areas were uprooted but weeds were left untouched.

James Silver conducted an anti-rat campaign at LaCrosse, Wis., early in July, in which such active support was given by the people that arrangements were made to carry the work to the surrounding country districts. Excellent results were obtained, both in the number of rats destroyed by the poisoning operations and in the interest aroused in improving further the sanitary conditions. In connection with this field trip Mr. Silver conferred with Carlyle Carr, who has been transferred from the Washington office to act as field leader of rodent control work in Indiana and Illinois, with which States cooperative project agreements have recently been completed. He also consulted with cooperating State officials, outlining with them plans for the coming year, and with representatives of the Institute of American Meat Packers, who had appealed to the Bureau for assistance in developing methods and plans for the elimination of rats from packing houses and other meat-handling establishments.

W. A. Mullins, leader of predatory animal control in Missouri, reports that Clyde Briggs succeeded, during June and July, in destroying a pair of notorious wolves in Texas County which had gained considerable notoriety by killing sheep, cattle, and dogs. The male was known locally as "Old Jumbo."

#### FUR RESOURCES

Mr. Ashbrook left Washington on July 13 for points in the New England States and certain Canadian Provinces to inspect fur farms and obtain data from fox and other fur farmers. Enroute he visited the Bureau's Experimental Fur Farm at Saratoga Springs with Doctor Nelson to see about new construction work to be done. A laboratory building, 16 by 30 feet, will be erected there as soon as the contract can be let. On July 31, Mr. Ashbrook reached Prince Edward Island, Canada, which is known as the cradle of the fox industry.

Manuscript of the new bulletin on Laws Relating to Fur Animals for the Season 1924-25 has been completed and is now in the hands of the Printer. It is being published under the joint authorship of F. G. Ashbrook and F. L. Earnshaw.

New lists have recently been prepared of fox breeders and breeders of fur animals who responded to a questionnaire sent out by the Bureau this year. These are now available for free distribution.

Dr. D. E. Buckingham, who is on special appointment to investigate fur-farming methods in Alaska, reached Juneau on July 23, and as a result of newspaper publicity given his arrival he was promptly in receipt of many requests for consultations from persons interested in the fur industry.

#### FOOD HABITS RESEARCH

During the latter part of July Mr. McAtee visited game farms in Virginia, New York, Pennsylvania, and New Jersey to study methods employed in raising pheasants and other game birds. He also visited western Maryland with a view to making recommendations for the improvement of waterfowl feeding grounds. It happened that on this trip, which covered one day, four States were included in the itinerary and field work was actually done in three of them.

C. C. Sperry visited the Eastern Shore of Virginia the latter half of July to investigate reported damage to soft-shelled crabs and clams by colonies of laughing gulls. He found that these birds were not inflicting any serious damage on the crab, clam, or fishing industries of that coast.

W. E. Manning and I. V. Shank report progress in connection with their survey of Minnesota lakes. An accident in rough weather on one of the lakes resulted in the capsizing of the boat, but fortunately with no more serious consequences than the loss of some equipment.

E. R. Kalmbach returned to Washington about the middle of July from Louisiana where he had gone to learn what bird mortality might result from dusting operations against the cotton-boll weevil. Owing to the combined effect of an unusually severe winter and exceptional drought this summer the weevil infestation in northern Louisiana was so light that no extensive dusting operations were carried out. The work was, therefore, terminated awaiting more favorable conditions for observation.

#### GAME AND BIRD RESERVATIONS

Mr. Riley returned to the office on July 28 after an absence of several months, during which time he visited Clear Lake, California; Lake Malheur, Oregon; National Bison Range, Montana; Elk Refuge, Wyoming; Niobrara Reservation, Nebraska; Wind Cave Game Preserve, South Dakota; Sullys Hill Game Preserve, North Dakota; and Clear Lake and Stump Lake Refuges, North Dakota.

Harvesting of the hay crop began at the Elk Refuge, Wyoming, on July 17.

An antelope buck has been received at Wind Cave Game Preserve from Washoe County, Nevada. It is quite tame and has been placed in a small inclosure near headquarters.



## MIGRATORY-BIRD TREATY AND LACEY ACTS

The seventh and eighth convictions for hunting from an airplane were obtained in the Federal court for the Eastern District of Oklahoma on June 11, 1924, when two persons charged with killing geese in this manner entered pleas of guilty and paid fines of \$25 each. United States Game Warden E. V. Visart, of Little Rock, Ark., obtained evidence in these cases.

Warden Riddick, of Houston, Tex., advises in his report of July 6 that he saw more doves in Gonzales, Seguin, and Wilson Counties, Texas, than ever before.

Mathew Reid Bailey, of Levys, Jasper County, South Carolina, was appointed U. S. Deputy Game Warden effective July 24.

The following appointments as U. S. Deputy Game Warden were terminated during July :

Henry Fox, Mercer University, Macon, Ga.  
 Albert Van Ausdle, College Place, Wash.  
 Julian P. Smith, 527 Brown Marx Bldg., Birmingham, Ala.  
 James W. Richardson, R.D. 4, Box A, Monroe, N.C.  
 Grant L. Shumway, Lincoln, Nebr.

Miss Adela M. Bittner, of Prairie du Chien, Wis., was appointed assistant clerk in this Division, August 4.

## Migratory Bird Treaty Act Cases Terminated - Reports Received During July.

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barmeier	1	Illinois	Killing grebes	\$1 and costs of \$16.10
Birsch	2	Virginia	Killing snipe in close season	\$20 each
" and Creighton*	3	"	Killing snipe in close season	\$20 each
Fleming,* Randall** and Barber**	2	Indiana	Hunting ducks in close season	\$10 each and costs
Folck*	1	Iowa	Killing a duck in close season	\$10 and costs
Hall* and Pierce*	2	New Jersey	Hunting ducks after sunset	\$10 each
Hilliard	1	" "	Hunting ducks after sunset	One day in jail
" and Pierce*	2	" "	Hunting ducks after sunset	\$10 each
Holmes and Armstrong**	2	Nebraska	Killing ducks in close season	\$10 each
Linebaugh	1	Kentucky	Hunting doves in close season	\$25
Merrill	1	Illinois	Possessing ducks in storage in close season	\$10 and costs
Scholler*	1	"	Shooting at a duck in close season	\$10
Shaver and Fidler*	1	"	Hunting ducks in close season	\$15
Stadlmeir	1	Massachusetts	Hunting ducks before sunrise	\$1
Steele, O. D. and Cooney*	1	Iowa	Possessing ducks in close season	\$15 and costs

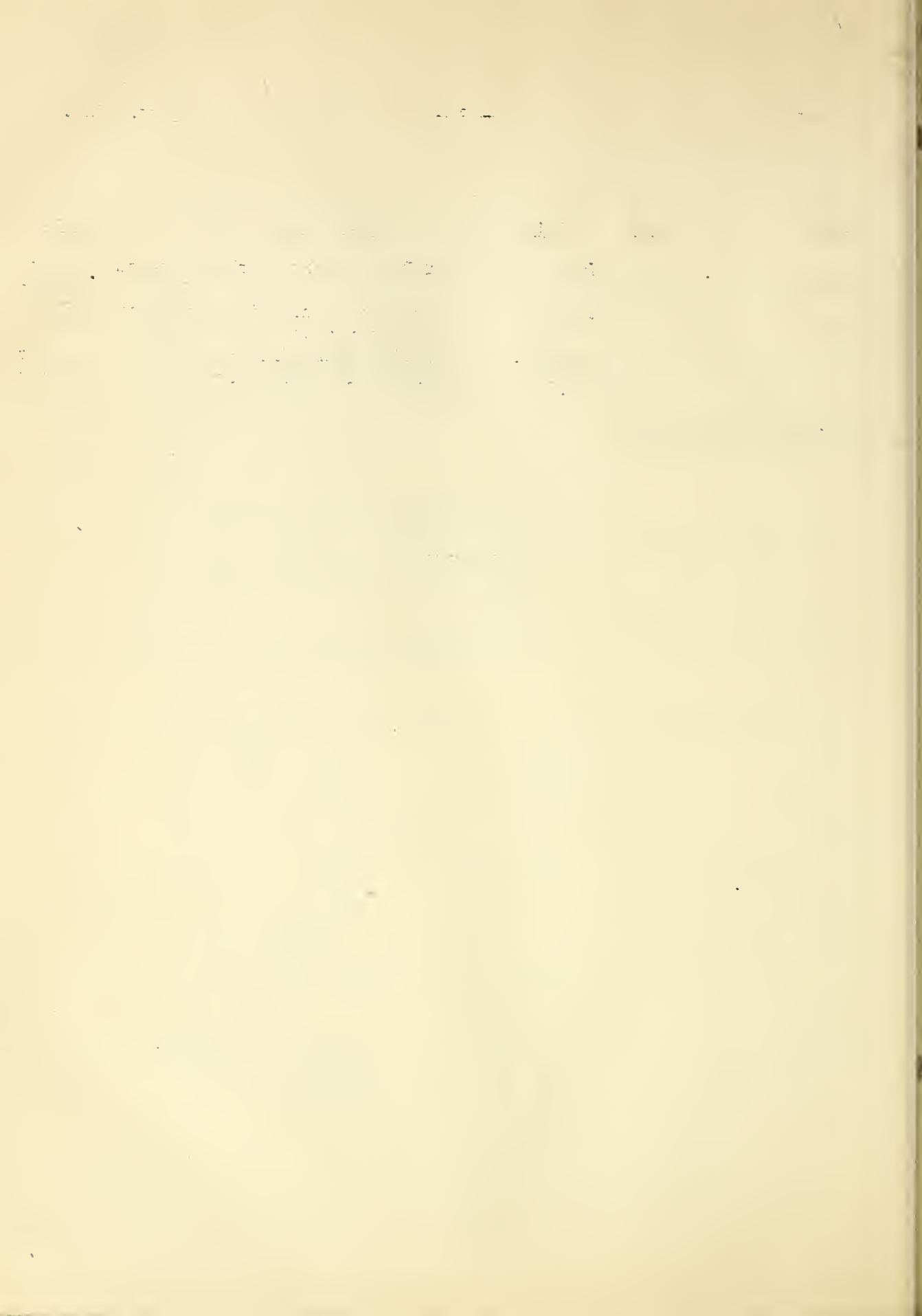


<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Steele, O. D. and Cooney*	1	Iowa	Killing a duck in close season	\$10 and costs
Tonkin	4	Utah	Possessing ducks in storage in close season	\$10 each
Visart	2	Oklahoma	Killing geese from airplane	\$25 each
Whitehead	6	Alabama	Killing doves in close season	\$10 each

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

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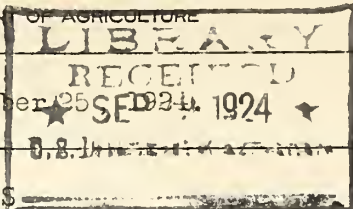
# THE SURVEY

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UNITED STATES DEPARTMENT OF AGRICULTURE

Vol. 5.

Washington, D. C., September 25, 1924

No. 9



## GENERAL NOTES

A recent radiogram from Mr. Henderson, sent from Juneau, Alaska, states that he will probably reach Seattle, Wash., on September 26, and Washington, D. C., early in October.

The following publications of the Bureau were issued in August:

- "Laws and Regulations Relating to Game in Alaska." Service and Regulatory Announcement No. 61. Received August 8.
- "Game Laws for the Season 1924-25," by Geo. A. Lawyer and Frank L. Earnshaw. Farmers' Bulletin 1444. Received August 12.
- "How to Attract Birds in Northwestern United States," by W. L. McAtee. Farmers' Bulletin 760, revised. Received August 25.
- "Text of Laws of the United States and Canada Relating to Game and Birds." Service and Regulatory Announcement No. 62. Received August 28.

Among manuscripts submitted for publication in August were:

- Jewett, Stanley G. "The Pipit (Anthus rubescens) Nesting in Oregon," for The Condor.
- Malloch, J. R. "New and Little Known Calyptrate Diptera from New England," for Occasional Papers, Boston Society Natural History.
- McAtee, W. L. "Economic Ornithology in Recent Entomological Publications," for The Auk.
- "The Fishes of Western South America, Part 1," a review, for Indiana University Alumni Quarterly.

## BIOLOGICAL INVESTIGATIONS

Mr. Goldman returned to Washington, September 9, from Arizona, where he had been requested to accompany a committee representing organizations concerned in game protection that has been studying conditions affecting deer on the Grand Canyon Game Preserve. He also inspected areas in and near Grand Canyon, one of which it is planned to stock with young antelope during the present month; and made an examination with Dr. W. P. Taylor of the experimental plots on which the effects of rodent grazing are being studied.

Dr. H. C. Oberholser returned on September 4 from a trip to Colorado, Iowa, and Minnesota. At Boulder, Colo., from July 14 to 17 as representative of the Bureau he addressed the second annual conference on nature protection and conservation, held under the auspices of the University of Colorado, the Colorado Mountain Club, and other State organizations interested in outdoor life, to awaken interest in natural resources and wild life of the State. He next represented the Bureau at the annual session of the American School of Wild Life Protection, at McGregor, Iowa, from August 3 to 15, and delivered there a series of lectures on different phases of wild life conservation. The session is reported as most successful, of special interest being a day set apart as



"Government Day," August 12, on which the conservation work of State and Federal Government was discussed by representatives of various departments. Addresses were also made by Doctor Oberholser in the interest of conservation at the 14th annual mid-summer outing of the Gopher Camp Fire Club, at Belle Lake, near Hutchinson, Minn., from August 17 to 19. This organization has for its purpose outdoor recreation and the conservation of game, and is exercising an important influence for conservation in Minnesota.

T. H. Scheffer made studies during August of the habits of various mammals injurious to agriculture and horticulture. These investigations included injury by the silver gray squirrel to trees in Puget Park and on the Spanaway prairies, relation of meadow mice to grain about Kennewick and Cunningham, and observations on moles, rabbits, and muskrats.

Dr. Walter P. Taylor, assisted by G. W. Sykes, continued investigations of the relation of rodents to forests, at the Southwestern Forest Experiment Station, near Flagstaff, Ariz. The mammals studied included porcupines, tuft-eared squirrels, mantled ground squirrels, and chipmunks. Observations of animals in the wild are supplemented by studies of captive individuals under conditions which permit exact computation of the injuries they inflict upon different forest trees.

Vernon Bailey returned on August 18 from Glacier Park, Mont., where he had been requested to conduct an investigation of the fauna of the park in cooperation with the National Park Service. He reports a very interesting trip, during which he noted many valuable data on the distribution and life history of the animals in the park.

#### ALASKA INVESTIGATIONS

Robert L. Steavens, a former Territorial game warden, has been appointed a United States game warden under the Bureau, with headquarters at Cordova. Mr. Steavens owns a boat in which he will patrol his district.

James S. Pitcher, of Ketchikan, has been appointed a United States game warden to enforce both game and fur laws. He was formerly a Territorial warden.

E. P. Walker, Chief Alaska game warden, attended a meeting of the blue fox farmers association of south central Alaska, at Cordova, September 2.

L. J. Palmer, assistant in charge of reindeer investigations in Alaska, with headquarters at the Experimental Station at Nome, is on his way to Washington, where he will prepare reports in connection with his work of the past two years.

Announcement has been received of the marriage of Mr. O. J. Murie and Miss Margaret Thomas, at Anvik, Alaska, on August 18. Mr. W. C. Henderson, assistant chief of the Bureau, was present. Best wishes are extended to Mr. and Mrs. Murie. They will be at home at Fairbanks, Alaska.

## ECONOMIC INVESTIGATIONS

Doctor Fisher left Washington on September 1 for an extended western field trip.

A live rodent displayed by Carlyle Carr at the Indiana and Illinois fairs attracted much interest. As a direct result of the rodent control exhibit at the Grand Forks Fair, North Dakota, arrangements were made with the county agent to demonstrate methods of controlling pocket gophers. After seeing the rodent control exhibit one farmer requested assistance, stating that unless he learned how to control pocket gophers in his alfalfa field he would have to plow up 20 acres.

D. A. Gilchrist, leader in rodent control in the Arizona District, reports excellent results with the tasteless poison developed in the laboratory at Denver. In a test plot of fifteen acres, 225 dead prairie dogs were found in one month, 125 of which were adults.

In a recent 30-day rabbit drive in Apache County, Arizona, 2,535 rabbits were shot, 1,150 of which were jacks.

Hunter S. M. Willis, of the Utah District, received reports during July from sheepmen in the vicinity of Escalante of damage by mountain lions. Shortly after moving on the ranch he found a sheep killed by a lion, using part of the carcass as bait, next morning he found an adult lion dead near it. This lion has recently killed 37 head of sheep on one ranch.

On July 1 a pocket-gopher eradication campaign was started on the Bessey Division of the Nebraska National Forest, South Dakota. Operations were confined to trapping, and 962 animals were taken in one month.

During July Cleve Miller, a hunter working in Arizona, caught five mountain lions, comprising an entire family of these game and stock destroyers. The old female and three yearlings were caught in one day, one of the yearlings being taken alive. Several days later the male was caught.

A pocket mouse demonstration was held during July near Kahlotus, Franklin County, Washington, where in one field of 160 acres these rodents had cut off and stored underground practically all the wheat heads. After three pounds of strychnine-coated oats had been distributed in this field 357 dead pocket mice were counted.

Following the discovery of bubonic plague in July among the ground squirrels in the foothills section of the San Luis Obispo County, surrounding the city of San Luis Obispo, Calif., Joseph Keyes, rodent leader for the State, made a survey of the situation with the public health and other officials and the local authorities. Field party operations covered all squirrel infested areas about the city east to the summit of the range and west to San Luis Obispo. Squirrels were taking poison readily and with good results. Arrangements have been completed for the treatment of all adjoining Government lands.

W. L. Chestnut, a hunter of the Texas District, succeeded in catching a notorious red wolf during July for which he had been trapping three months. This wolf had destroyed \$300 worth of sheep for one rancher in the last year, and numbers of chickens, turkeys, and young pigs.

Ross Graves, also a hunter of the Texas District, found signs of two wolves running over a large range on the Johnson ranch near Brady, and a few days later caught the female, after which the male left the range. These wolves in six months had destroyed 81 sheep and lambs besides 20 goats.

L. J. Goldman, leader in predatory animal control in Idaho, reports that Hunter Jack Clegg recently caught a bear that had killed 30 sheep in one night.

Harold Dobyns, assistant leader of predatory animal control in the State of Washington, recently killed a large coyote which had destroyed 515 chickens and 40 turkeys for one man, including a prize-winning pullet with a trap-nest record of 333 eggs. Within 24 hours after reaching the place Mr. Dobyns had caught the offending coyote.

#### FUR RESOURCES

Mr. Ashbrook returned to Washington on August 29 after a six weeks' trip of inspection of fur farms in the New England States and Eastern Canada, made for the purpose of investigating economical methods of raising fur-bearing animals in captivity.

Dr. Karl B. Hanson, in charge of the Experimental Fur Farm at Saratoga Springs, reports that the work on the new fox pens now under construction is progressing satisfactorily and that work on the laboratory building is starting. Feeding experiments are being carried on with foxes to determine the quality and quantity necessary to develop pups into good breeding animals and to carry old foxes over the summer months.

Dr. D. E. Buckingham returned to Washington on September 15 after two months spent in studying diseases and parasites of foxes in Southeastern Alaska, where he was able to give help and advice to many persons engaged in fur farming. The industry in Alaska is represented by four fur farmers' organizations.

#### FOOD HABITS RESEARCH

C. C. Sperry has returned from a trip to Massachusetts and Maine, in the course of which he investigated complaints of bird depredations. In Massachusetts a study was made of the food habits of night herons in their relation to game fish, including trout. On the coast of Maine reported depredations of herring gulls to the blueberry crop were studied and in the northwestern part of the same State the food habits of great blue herons and mergansers.

W. E. Manning and I. V. Shunk have completed their season's work in the survey of the lakes of Minnesota. While good progress was made, there are some sections of the State in which work is still needed.



## IMPORTATIONS

Among the birds imported during the month of August were four Kaleeje pheasants which arrived at the port of New York, N. Y., in a shipment of miscellaneous birds from Hamburg, Germany, on August 4.

The number of Cuban parrots imported during the months of June, July, and August, was 3,691; for the corresponding period in 1923 the number was 2,853, and in 1922, 2,300.

## MIGRATORY-BIRD TREATY AND LACEY ACTS

Kenneth F. Roahen, of Wenatchee, Wash., has been appointed, effective September 1, United States game warden with headquarters at Havana, Ill., to fill the vacancy created by the resignation of B. G. Merrill.

Mr. Lawyer visited the eastern shore of Maryland and Virginia from August 14 to 18, in connection with enforcement of the Migratory-Bird Treaty Act and Regulations.

Increases noted in the numbers of birds are shown by reports as follows:

From the weekly report of Warden W. L. Birsch, Norfolk, Va., for August 16: "The natives at Swan Quarter, N.C., informed me that they have never known as many black ducks and mallards to nest in the marshes of Hyde County before; that they look for one of the biggest hunting seasons this year they have had in several years, due to the fact that Mattamuskeet Lake, filled with water to what it was before being drained."

Referring to observations made in the vicinity of Demopolis and Greensboro, Ala., Warden Hoffman has the following to say in his report of August 11: "Saw thousands of doves. Everybody saying there are more doves this year than ever before. Saw five hundred doves feeding on Johnson grass in an acre of ground."

A correspondent writes in part as follows: "Last December on the North Carolina coast, near Currituck Sound, I saw a great raft of canvasback ducks, both sitting and in flight, and feel entirely safe in stating that there were more than one hundred thousand of them. I have never seen so large a number of ducks of any kind together at once."

"I have never seen so many birds before, as for forty miles there were thousands of willet and yellowlegs and other shorebirds on the beaches and they were very tame as they hardly got out of the way of the car. Have never seen them so early in the season." From Warden Pacetti's weekly report for August 16.

The first edition of the game law bulletin for the season 1924-25 (T.B. 1444) consisted of 250,000 copies. It contains a summary of the game laws applicable to the several States and Territories, the Provinces of the Dominion of Canada, and Mexico.

The text of the Migratory Bird Treaty, Act, and Regulations in revised form is now available in Service and Regulatory Announcement, B.S. 62.

An order was issued by the Secretary on August 28, permitting the employees of the Metropolitan District Commission of the Commonwealth of Massachusetts to kill gulls and terns when found on the Chestnut Hill and Spot Pond Reservoirs in Massachusetts, in order to protect those waters from these birds.

The following item regarding gulls, which are protected at all times under the Migratory-Bird Treaty Act, is quoted from the Gazette, Billings, Mont., of August 26, 1924:

GULLS DESTROY GRASSHOPPERS

THE BILLINGS GAZETTE

Thousands of Birds Do Valiant Work about Valier

According to P. F. LaValle, of the Valier-Montana Land and Water Company, sea gulls of a variety believed to be the Franklin gull are solving a problem in eradicating grasshoppers in Pondera County, which poison and other forms of preventives long since failed to do.

Flocks working in units of between 4,000 and 5,000 birds have done the job so nicely around Valier that farmers in that section look forward to a hopperless season next year, and there is now a movement on foot in that county aiming to protect the birds by State law and to give them the credit they deserve. Pondera County, like many others of the State, has suffered a great loss through the pest and, though poison has been used in great quantities, the desired effect was not obtained until the gulls came.

"During the last six or eight weeks great flocks have commenced to prey on the grasshoppers," says Mr. LaValle. "From my personal observation it would seem that they generally work in alfalfa fields immediately after the hay has been taken off, and usually move about from place to place in flocks of about 4,000 to 5,000. After working for a day or two on a field, depending upon its size, I have noticed that virtually all the grasshoppers are destroyed. On my own fields it so happened that the hoppers were very plentiful, although I had used poison quite freely. The land adjoining was vacant and because no poison was used there the pests were constantly flying into my fields, so that the time and expense of putting out poison was practically lost."

"A few weeks ago the gulls came, great clouds of them," says Mr. LaValle. "They stayed for two or three days and then moved on to conquer a new hopper army. Since that time not a hopper has been seen."

LaValle calls the birds "benefactors" and feels that they should be protected. He thinks they are the same which legend credits with saving crops for the early Mormon settlers in Utah, where as a result gulls have been protected by law for many years.

The following appointments were made to the position of U. S. deputy game warden during August:

Bernard F. O'Toole, Thurmont, Md.  
 Elijah W. Tate, Coinjock, N. C.  
 Douglas B. Barclow, 170 North Tenth Ave., Phoenix, Ariz.  
 H. D. Wilson, 814 E. Garfield St., Phoenix, Ariz.  
 Ray C. Ellis, 1518 So. Third St., Fresno, Calif.

Appointments of the following U. S. deputy game wardens were terminated during August:

Claude Nugier, Perry, Ia.  
 Kenneth F. Roehen, Wenatchee, Wash. (Appointed U.S. game warden.)

Cases Reported for Prosecution

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>
Barmeier	1	Missouri	Selling ducks
"	1	"	Killing ducks in close season
Barmeier and Fix***	1	Illinois	Possessing a catbird and robin
Britton	2	Louisiana	Hunting ducks after sunset
Creech* and Heller*	2	Illinois	Hunting ducks during close season
Farnham	3	New York	Unlicensed taxidermists offering mounted specimens for sale
Hoffman and Bacon**	4	Alabama	Killing doves in close season
Hoffman	1	"	Killing bullbats
Kelsey and Shaver	3	Missouri	Possessing ducks in close season
Linebaugh	1	Kentucky	Hunting ducks in close season
"	3	"	Killing ducks in close season
Pacetti	2	Florida	Killing ducks in close season
Riddick	2	Texas	Killing doves in close season
"	2	"	Possessing doves in close season
Shaver and Rogallo***	1	Minnesota	Killing a herring gull
Smith	2	Maine	Killing terns

\* U. S. deputy game warden

\*\* Deputy state game warden

\*\*\* Cooperator



Cases Terminated - Reports Received During August.

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Black*	1	Michigan	Hunting ducks after sunset	\$50
Charlton and Perry	2	Tennessee	Killing swans	\$25 each and costs
Hoffman and Bacon*	1	Alabama	Hunting doves in close season	\$50
Hoffman	1	"	Killing nighthawks (bullbats)	\$5
Pacetti	2	Florida	Killing ducks in close season	\$5 each
Perry	1	Tennessee	Killing a swan	\$10

\* Deputy State game warden

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# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Vol. 5.

Washington, D. C., October 27, 1924.

No. 10

## GENERAL NOTES

Doctor Nelson left Washington on October 3 for a several weeks' field trip through the Southwest and west-coast States.

Mr. Henderson has returned to the office from his field investigation trip of several months in Alaska.

G. E. J. Banks, recently appointed messenger, resigned October 6 to enter Howard University.

The following publications of the Bureau were received in September:

- "Revision of the American Pikas (Genus Ochotona)," by Arthur H. Howell. North American Fauna No. 47. Received September 23, 1924.
- "Anthelmintic Efficiency of Carbon Tetrachloride in the Treatment of Foxes," by Karl B. Hanson and H. L. Van Volkenberg. Journal of Agricultural Research, vol. 23, no. 4. Received September 26, 1924.
- "How to Attract Birds in the Middle Atlantic States," by W. L. McAtee. Farmers' Bulletin No. 844, revised. Received September 27, 1924.
- "Laws Relating to Fur Animals for the Season 1924-25," by Frank G. Ashbrook and Frank L. Earnshaw. Farmers' Bulletin 1445. Issued September, 1924; received October 7.

Among manuscripts submitted for outside publication in September were:

- Gabrielson, Ira N. "Two Oregon Water Bird Records of Interest," for The Condor.
- McAtee, W. L., and J. R. Malloch. "Revision of Bugs of the Family Cryptostemmatidae in the Collection of United States National Museum," for Proceedings of the United States National Museum.
- Preble, Edward A. "Bubo, the Great Horned Owl"; "The Bull-frog and His Cousins"; "A Captive Shark"; and "The Snapping Turtle," for Nature Magazine.

## BIOLOGICAL INVESTIGATIONS

Dr. W. P. Taylor returned to Tucson late in September from the Southwestern Forest Experiment Station near Flagstaff, where in cooperation with the Forest Service he has been investigating the relations of certain rodents to the forest. The results of his investigations of the habits of the porcupine, Abert squirrel, and other rodents will be awaited with interest. On his way to Tucson Doctor Taylor attended the convention of the Arizona Game Protective Association at Prescott, where he took part in several discussions regarding conservation.

Theo. H. Scheffer confined his field work during September mainly to short trips with special reference to moles, silver gray squirrels, and beavers. He reports the interesting fact that during the present season the squirrels have failed to attack the bark of the firs, pines, and maples, which usually suffer from their operations. This he attributes to an unusually heavy crop of cones on the firs. During a three-day trip to Mount Rainier National Park all the beaver colonies were found in prosperous condition, and fresh beaver work was noted on Horse Creek just south of the Park boundary. Mr. Scheffer arrived in Washington, D. C., on October 17 where he expects to spend two or three months. This is the first time that he has been east since his assignment to field work in the State of Washington in 1914.

Vernon Bailey has just returned from Lyons Falls region in the Adirondacks, where he has been testing an improved model of his trap for capturing beavers alive. The beavers were found to be shy and suspicious and not so easily enticed into traps as before the open trapping season of last March. Their numbers were also considerably reduced, and many of their houses and dams were deserted. In addition to data on the beaver, many notes of interest on other species were collected.

#### ALASKAN INVESTIGATIONS

As an indication that the industry of propagating small land fur-bearers in the Territory is growing rapidly, many permits are being issued this season to capture alive such animals as minks and martens.

The name of the new power boat recently purchased to patrol the Cook Inlet region has been changed from Beaver to Marten, for the reason that the Bureau of Education of the Department of the Interior has a boat of the former name operating in Alaskan waters.

#### ECONOMIC INVESTIGATIONS

Doctor Fisher is continuing his western trip and has visited points in Wyoming, Colorado, South Dakota, North Dakota, Montana, Utah, Idaho, Washington, and Oregon.

James Silver made a trip recently to the Chapman Field Experiment Station, Coconut Grove, Fla., for the purpose of studying the habits of land crabs and devising means to prevent damage by them to truck crops. Experimental pens were constructed to determine the practicability of fencing the Department's Plant Introduction Garden and other similar areas for the purpose of excluding the crabs. As a direct result of the campaign carried on a year ago, over 7,500 pounds of carbon bisulphide have been used by local growers. From 5 to 10 drops is all that is required for one crab burrow, so that the amount used should have destroyed the occupants of over 3,500,000 burrows. Mr. Silver also visited Key West and other points in Florida, making the trip from Miami to Key West by airplane.



J. S. Ligon, leader of predatory-animal control in New Mexico, has been assigned to assist the State game department of Minnesota for a time in organizing operations for the control of predatory animals in that State. Enroute to Minnesota, he stopped off at Smithland, Iowa, to demonstrate methods of controlling coyotes, which had been reported as doing serious damage in that region.

V. P. Deemer reports good progress made in exterminating foxes on the Turtle Lake Game Refuge in the Lower Peninsula of Michigan. In past years it was impossible to propagate partridges owing to the great number of foxes infesting the refuge. Since April O. A. Hayner has reduced the number of foxes until the owners of the Turtle Lake Refuge are satisfied that there are few, if any, left there, making conditions more favorable for increase of partridges and bobwhites.

Field mice have increased to such an extent in orchards of the Boise River valley, Idaho, that, in many instances, serious damage to fruit trees will occur if control measures are not undertaken, according to a statement by W. E. Crouch. In most cases orchard owners are aware of the situation and are taking steps to check possible damage. In Ada and Canyon Counties, 3,630 pounds of bait have been used recently in poisoning mice in orchards.

Losses of livestock were recently reported to W. A. Mullins, leader of predatory animal control in Missouri, from 26 counties, totaling thousands of dollars. The majority of these reports came from coyote-infested counties, the heaviest losses being sheep, many of which are of purebred strain and often worth from \$50 to \$100 each. Reports of coyote or wolf infestation have been received from 103 of the 114 counties of the State.

W. J. Nearing, a hunter in Colorado, reports trapping a coyote as black as coal, the skin of which he was unable to save.

Joe F. Bell, a hunter working in McDonald County, Missouri, writes that fox hunters have hunted with their dogs on an average of twice a week over the territory where his traps are located. If it was their intention to prevent him from making a catch, they failed, for he landed one of the pair of wolves which killed \$150 worth of goats for one farmer and numerous other goats in the community.

The supervisor of the Whitman National Forest, Oregon, reports that a cougar killed 45 ewes and lambs from one band one night in August. The supervisor of the Ochoco National Forest states that 46 sheep were killed on Mount Pisgah by a bear in one night.

Large numbers of young game birds were killed by rats at the Steilacoom State Game Farm, Wash., during the summer. One large male rat killed 17 young Chinese pheasants in one night. The rats were cleaned out promptly by L. K. Couch when reported.

L. J. Goldman states that in Idaho bears have inflicted much damage to sheep this season, due apparently to a shortage of their natural food. This is particularly true on the Sawtooth and Targhee Forests. On the Targhee, losses have been so serious as to prove a real menace to the sheep industry. One livestock company reports a loss of 150 sheep, killed by bears.

Work by L. K. Couch on pocket-mouse control brought out the fact that this rodent has increased until it almost constitutes a plague in parts of Washington. Around the edges of one 160-acre field it was estimated that 1,500 mice were poisoned.

C. R. Landon reports that a mountain lion killed between 30 and 40 sheep and goats in the two nights August 10 and 11 on a ranch near the mouth of the Pecos River in Texas.

The operator of a commercial apiary, near Prineville, Oreg., has had a great deal of trouble with skunks undermining the hives, stealing the honey, and killing the bees. He was supplied with some processed strychnine and instructed how to mix part of it with an egg, as bait. Four such baits were placed, one near each hive, the first night, and the next morning there were four skunks lying dead near them. The second night seven baits were placed and seven dead skunks resulted. During the week 28 skunks, one badger, and a number of magpies were found dead. No animal was more than 3 feet from the bait.

Hunter W. C. Snyder, who, with the use of an automobile, placed traps about waterholes and runways over approximately 300 miles of desert roads and sheep trails in Oregon, succeeded in trapping 150 coyotes during August in a territory where these animals were not considered especially numerous. Snyder worked practically day and night to accomplish this big catch, which is the largest made since the initiation of the work. The previous honor men were E. L. Homan, who caught 115 coyotes in one month in 1923, and Joe Smith, who caught 104 coyotes and 10 bobcats in one month in 1921. Both of these catches were made in Texas.

J. W. Swartz, in charge of the U. S. Range Experiment Station in Montana, reports that prairie dogs are destroying about 16 per cent of the range over about 57,000 acres, the dog towns being in the best grazing areas. He also states that pocket gophers are causing considerable damage in alfalfa fields and about irrigating ditches. This range was inspected recently by Doctor Fisher and O. E. Steph. Plans are being made in cooperation with the Bureau of Animal Industry to clear it of prairie dogs and to study resulting improvements in forage production.

Cleve Miller, a hunter in Arizona, recently killed an unusually large black bear that had been shot through the leg some years previously, leaving it very crooked. He found four carcasses of cows killed by this bear.

Within two hours after hunter J. R. Stevenson left the vicinity of Eatonville, Wash., a wily coyote got into a flock of pedigreed White Leghorn hens and killed 26 by biting them through the back. Mr. Stevenson caught seven coyotes in this locality.

Ranchers in McCullough County, Tex., report the loss of 75 sheep and goats by one red wolf. Hunter Ross Graves caught the outlaw.

A campaign against groundhogs, or woodchucks, conducted in April in Morgan County, Indiana, by the Eastern Rodent Control District, was highly successful. No groundhogs are now to be found in regions which were heavily infested last spring.

#### FUR RESOURCES

Doctor Nelson and Mr. Ashbrook attended the conference held under the auspices of the National Association of the Fur Industry, at Washington, October 1 and 2. Secretary Wallace, who was invited to deliver the opening address at this conference, was prevented on account of illness, and Doctor Nelson represented him and spoke on "The Importance of Conserving the Fur Supply." Mr. Ashbrook also addressed the conference on "Trapping Laws and Their Relation to a Constant Supply of Fur."

Doctor Hanson, in charge of the Experimental Fur Farm, at Saratoga, N. Y., reports excellent progress in the construction work going on. Six fox pens and a laboratory building have just been completed.

A new list of the fur farms of Alaska has recently been compiled by Ernest P. Walker, chief Alaska game warden, and is now available for distribution.

Arrangements have been made to place a copy of Farmers' Bulletin No. 1445, "Laws Relating to Fur Animals for the Season 1924-25," in the hands of about 50,000 persons who will actually engage in trapping this season, in order that they may be fully informed regarding the laws in their respective States.

#### FOOD HABITS RESEARCH

J. R. Greeley, who has been engaged in laboratory work under temporary appointment during the summer months, has returned to Cornell University to continue his studies.

F. M. Uhler has received a renewal of his temporary appointment, which will enable him to continue the examination of bird stomachs in the laboratory.



## GAME AND BIRD RESERVATIONS

Nine antelope were shipped in September to the National Bison Range, Mont., ten to Niobrara Reservation, Nebr., and twelve to the Grand Canyon Game Preserve, Ariz., all from Reno, Nev. These young antelope were picked up on the open range soon after birth and raised on the bottle in a corral on a ranch owned by O. C. Wood, one of the predatory animal hunters of the Bureau, at Diessner, Nev. The Governor of Nevada gave permission to capture the fawns, and 40 were obtained, placed in gunny sacks, and carried to the ranch, where several cows were kept to insure an adequate supply of milk during the summer. A few of the fawns injured or killed themselves while in captivity, but the majority survived in fine condition. This is the first time that fawns for restocking purposes have been taken from their mothers immediately after birth. When about three months old, the young antelope were given some grain and corn so that by the time they were ready for shipment they were weaned from the use of milk. Each animal was carefully crated for shipment. One of the antelope received at the Bison Range has since died, but with the exception of one sent to Niobrara the others are all in good condition. When the twelve young antelope arrived at the Grand Canyon Game Preserve, Arizona, the crates containing them were carried down the trail on pack mules - two to a mule - to the Tonto Plateau, a distance of eight miles, where they arrived in good shape. One antelope was injured after arrival, its leg having been broken in the crate, and it was necessary to kill it. It is hoped that the others will thrive. The representatives of the Biological Survey, who captured and raised the young antelope, under the leadership of E. R. Sans, in charge of predatory animal control in the State, did an excellent piece of work and are to be highly commended.

The fire patrol at Lake Malheur Reservation, Oregon, has been discontinued, as it is believed that danger of the fire again breaking out has passed, though it is still smouldering in the sod at certain places. During recent migrations of birds, very few stopped at the refuge. This was due, no doubt, to the shortage of feed and water caused by the extremely dry season.

The regulations pertaining to collecting birds and their nests and eggs on Federal bird reservations for scientific and propagating purposes have been amended by the Secretary to permit the killing of predatory animals and birds of prey on reservations, by employees of the bureau, in accordance with the laws of the State or Territory in which the reservation is situated, at such times as the chief of the Biological Survey may designate.

Wesley D. Parker, warden of Sullys Hill Game Preserve, North Dakota, recently reported that many ducks were stopping on Sweetwater Lake within the reservation and that blue-winged teal are numerous. The tame

mallards on the lake, as they become accustomed to seeing more people visiting the preserve, come to the shore for feed, and many of the wild ducks visiting the reservation come to feed with them. Wild geese come near the tables at the picnic grounds to obtain feed from visitors. A pavilion has been constructed at the picnic grounds to afford shelter for the visitors to the preserve.

A surplus buffalo bull was sold and killed at the Niobrara Reservation on October 1 for a barbecue held by the Indians at Rosebud Agency.

Two buffalo calves have been loaned from the National Bison Range for exhibition, one at the fair at Billings, Mont., and the other at Helena, Mont.

Warden B. J. Pacetti, of Mosquito Inlet Reservation, Florida, reports a very large flight of ducks there from September 19 to 23. He states that there are many gulls, terns, and skimmers in the locality, also a great many yellowlegs and other shorebirds, and several hundred pelicans, altogether a large increase over last year.

#### IMPORTATIONS

Considerable activity was manifested in the importation of foxes from Canada in September, permits having been issued for the entry of 1,287, most of the animals coming from Prince Edward Island and being entered at the port of Vanceboro, Me.

The first large shipment of pheasants from Europe since the war, consisting of 1,270 birds from England, was entered at the port of New York on September 29.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Lawyer left Washington on October 3 for an official trip of several weeks' duration, which will carry him into many of the States east of the Rocky Mountains.

The annual directory of officials and organizations concerned with the protection of birds and game for 1924 has just been published, as Department Circular No. 328. It contains a corrected roster of Federal, State, and Provincial game officials, also a list of the officials of National and State game associations and Audubon Societies.

Gratifying game conditions in different sections of the country will be observed from the following:

From the report of Warden J. E. Perry, Memphis, Tenn., for August 19: "On the trip from Tupelo, to West Point, Miss., through the prairie, where practically nothing is raised except hay and grain, I saw more doves flying over the fields, frightened by the passing of the train, than I have seen all the rest of the year - many thousands of them.

Concerning observations made in the vicinity of Sioux City and Bronson, Iowa, Warden Orin D. Steele states in his report for September 16: "About 125 hunters were out and five minutes after the shooting began there were thousands of ducks and the bag limit was reached in most cases. Shooting was declared better than the opening morning for many years. Possibly the best shooting the present generation has ever seen."

Geo. M. Riddick, warden at Houston, Tex., observes in his weekly report for September 13: "During the week I have covered several counties and have seen a large number of mourning doves. I was told in each community that there were more doves this year than at any time in recent years."

The Bureau has learned with regret that Deputy Mathew R. Bailey, of Levys, S. C., was accidentally shot and killed while deer hunting in the vicinity of Pritchard, S. C., on October 1. Mr. Bailey was appointed to the position of Federal cooperative warden on July 24, 1924.

An order was issued by the Secretary on September 22, permitting the killing of Lewis woodpeckers when found injuring pears, apples, and small fruits in Oregon and Washington. Persons may kill birds under this order from July 1 to October 31 when authorized by a permit issued by the Secretary and countersigned by the chief game official of the State.

The Bureau's motorboat Curlew stationed at Washington, D. C., has again been placed afloat after having undergone extensive alterations, including the installation of a new 40-H.P. Lathrop engine.

Albert Stadlmeir, warden at East Providence, R. I., resigned on September 16, as he found it necessary to return with his family to his former home at Lackawanna, N. Y. He has since been appointed U. S. Deputy Game Warden.

The following appointments were made to the position of U. S. Deputy Game Warden during September:

Frederick L. Marvail, West St., Laurel, Del.  
Eugene F. Bendler, Port Penn, Del.  
Bert Landes, Bath, Ill.



## Cases Terminated - Reports Received During September

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Bloxsom	2	Maryland	Killing a swan	\$10 each and costs
Holmes	1	Kansas	Operating without Federal permit	\$25 and costs
Linebaugh	1	Kentucky	Killing a heron	\$10
"	1	"	Killing swifts	\$25
"	1	Tennessee	Hunting doves in close season	\$25
Riddick	3	Texas	Killing doves in close season	\$10 each
Scholler*	1	Illinois	Killing insectivorous birds	\$25 and costs
Shaver	4	Minnesota	Possessing ducks in storage in close season	\$10 each
Steele	1	Washington	Hunting ducks after sunset	\$10
Steele and Jones**	3	"	Hunting ducks after sunset	\$25 each
Tonkin	2	Utah	Possessing ducks in storage in close season	\$10 each
Visart	2	Arkansas	Selling ducks	\$20 each
Whitehead	5	Georgia	Killing doves in close season	\$50 each

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

## Cases Reported for Prosecution

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>
Barmeier and Heller*	2	Missouri	Killing insectivorous birds
Bernd* and Horner**	2	New Jersey	Killing insectivorous birds
Birsch and Capps*	1	No. Carolina	Possessing a curlew
Birsch and Jones*	1	Virginia	Killing a duck in close season
Hilliard and Pierce*	1	New Jersey	Killing sandpipers
Linebaugh	1	Kentucky	Killing swifts
"	1	"	Selling ducks
"	1	"	Killing herons
"	1	Tennessee	Hunting doves in close season
Perry	1	Mississippi	Shooting at wood ducks
Ransom and Brockman**	1	Idaho	Killing ducks in close season

## Cases Reported for Prosecution - Cont'd.

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>
Roahen and Charlton	1	Illinois	Killing wood ducks
Scholler*	1	"	Killing insectivorous birds
"	2	"	Possessing insectivorous birds
"	3	"	Possessing terns
Smith and Stadlmeir	2	Massachusetts	Killing sandpipers and terns
Smith and Wallace**	1	Maine	Killing turnstones
Visart	2	Arkansas	Selling ducks.
Whitehead and Merier**	11	Georgia	Exceeding daily bag limit on doves

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Vol. 5

Washington, D. C., November 22, 1924

No. 11

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## DEATH OF THE SECRETARY

The Biological Survey has suffered a distinct loss in the death of the Secretary, Henry Cantwell Wallace, which occurred at the Naval Hospital, Washington, D. C., on October 25, following an operation. As a friend of wild life and a lover of the out-of-doors, Mr. Wallace was much interested in the work of the Biological Survey. It will be remembered also that he opened the President's recent Conference on Outdoor Recreation and introduced to it both the President of the United States and its permanent chairman.

In the current issues of The Official Record references are made to the passing of Mr. Wallace and to the letters of President Coolidge and others to Mrs. Wallace. The following excerpts from The Outlook for November 5 (pages 350-351) are deserving of quotation here, this being in addition to laudatory comments in that journal on the achievements of the late Secretary in the Department:

"Secretary Wallace had taken his official duties even more seriously than is customary with men called to Cabinet positions. Somewhat because of that, somewhat because of the early-rising habit of the farm, which had never left him since his boyhood, he was usually at his desk and at work before the rest of official Washington had finished shaving. He worked hard - too hard, his friends thought. And overwork, very likely, was a contributing cause to his untimely taking off. Secretary Wallace's hard work, however, was not wasted. . . . What he accomplished as Secretary of Agriculture was no more than the culmination of a life work. His work as an agricultural editor, extending over the greater part of his active life, constituted his largest contribution to social welfare. . . . 'Wallace's Farmer' is and has long been one of those rare achievements in journalism, a paper . . . which exerts an influence greater than others of circulation many times larger."

The October issue of the Bulletin of the American Game Protective Association, commenting on the death of the Secretary, says, "Secretary Wallace's death is a very real blow to millions of people in this country. The sportsmen will feel his loss as keenly as any others, because Mr. Wallace never failed to turn an attentive ear to all problems affecting the well-being of the game which came under the jurisdiction of his Department."

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## GENERAL NOTES

It is with deep regret that we note the death on November 3, 1924, of Ned Hollister, Superintendent of the National Zoological Park, Washington D. C., and a former member of the Biological Survey. Mr. Hollister was connected with the Biological Survey from June, 1902, to December, 1909, when he resigned to join the staff of the United States National Museum, as assistant curator of mammals, which he left in 1916 to take charge of the National Zoological Park. While with the Bureau Mr. Hollister did field work in Texas, New Mexico, Alaska, British Columbia, Washington, Oregon, California, Utah, Nevada, Louisiana, and Arizona. He was author of two of the numbers of the North American Fauna series of the Biological Survey - No. 32, "A Systematic Synopsis of the Muskrats," 1911; and No. 40, "A Systematic Account of the Prairie Dogs," 1916 - and of numerous other works on zoology, some of the more important of which dealt with the birds of Wisconsin (1903), mammals of the Philippine Islands (1912), the grasshopper mice (1914), and East-African mammals (1910-1924). Mr. Hollister served several scientific societies in official capacities, and was editor of the Journal of Mammalogy from its establishment to the time of his death.

The Biological Survey was represented at the Forty-second Stated Meeting of the American Ornithologists' Union, held in the Lecture Hall of the Carnegie Museum, at Pittsburgh, Pa., November 11-13, by Dr. A. K. Fisher, A. H. Howell, F. C. Lincoln, W. L. McAtee, Dr. H. C. Oberholser, Dr. T. S. Falmer, and Dr. Alexander Wetmore. The program included the following papers by members of the Bureau: Doctor Fisher, "In Memoriam: Walter Bradford Barrows"; Mr. Lincoln, "Results of Bird Banding in Europe"; Doctor Wetmore, "Systematic Position of the Fossil Palaeospiza bella" and "Our Migrant Shorebirds in Southern South America"; Miss May T. Cooke, "Bank Swallows - A Bit of Life History" (presented by Mr. Lincoln). The exhibition of paintings by American bird artists included six by E. R. Kalmbach, of the Biological Survey, as follows: Great horned owl and head of great horned owl, snowy egret, black-necked stilt, starling, and bald eagle (the last-named loaned by The Literary Digest, of New York).

The Biological Society of Washington was addressed by Vernon Bailey on October 25 on "Recent Observations on Glacier National Park," and on November 8 by Theo. H. Scheffer on "Mountain Beavers and Moles in the Puget Sound Country," and by Frederick C. Lincoln on "Results of Bird Banding in Europe."

Doctor Nelson is continuing his western trip, and during the first of November was in Los Angeles, Calif., and Phoenix, Ariz.

Dr. Alexander Wetmore, of the Division of Biological Investigations, has been appointed, effective November 19, to succeed the late Ned Hollister as Superintendent of the National Zoological Park, Washington, D. C. He thus completes nearly fifteen years of service with the Biological Survey, having received his initial appointment in the spring of 1910, for field work in Wyoming. Subsequent notable projects conducted by him include a study of the fauna of the Alaska Peninsula and the Aleutian Islands, in 1911; an investigation of the distribution and economic status of the birds of

Porto Rico, undertaken at the request of the Commissioner of Agriculture of Porto Rico, in 1912; an exhaustive study of the causes of the mortality of ducks in Utah in 1915 and 1916; an extended trip to Argentina and Paraguay in 1920 and 1921 to study conditions surrounding the wintering grounds in those countries of birds migrating from North America; and a biological investigation of the Hawaiian Group and other neighboring oceanic islands in 1923 in cooperation with the Bishop Museum, of Honolulu. In addition, he has made special trips from time to time, his itinerary including most of the southern, central, and western States. The results of some of these investigations have been published and reports on others have been prepared, but not yet issued. The selection of Doctor Wetmore for this new post of duty is most fitting, by reason of his wide knowledge of both New and Old World zoology, his proved administrative ability, and his pleasing personality. While the loss of his services and presence in the Bureau is regretted, Doctor Wetmore takes with him the best wishes of all his former associates for success in this important and congenial assignment.

The following publications of the Bureau were issued in October:

"Directory of Officials and Organizations Concerned with the Protection of Birds and Game: 1924," by George A. Lawyer and Talbott Denmead.

Department Circular No. 328. Received October 10.

"Damage to Range Grasses by the Zuni Prairie Dog," by Walter P. Taylor and J. V. G. Loftfield. Department Bulletin No. 1227. Received October 17.

"Food Habits of Some Winter Bird Visitants," by Ira N. Gabrielson. Department Bulletin No. 1249. Received October 29.

"Returns from Banded Birds, 1920 to 1923," by Frederick C. Lincoln. Department Bulletin No. 1268. Received October 17.

Among manuscripts submitted for outside publication in October were:

Ashbrook, Frank C. "Trapping Laws and Their Relation to a Constant Supply of Fur."

Bailey, Vernon. "The Mountain Whistlers."

Howell, Arthur H. "Preliminary Descriptions of Five New Chipmunks from North America."

McAtee, W. L. "The Goose Pastures of Louisiana."

-----"Predatorial Capacity (Odonata)."

Malloch, J. R. "Exotic Muscaridae, Diptera (Part XV)."

Oberholser, Harry C. "August and September Birds About Washington, D. C."

-----"Migration of North American Birds, XXVI."

Taylor, W. P. "The Intellectual Worker and His Work (MacDonald): A Review."

Wetmore, A. "The Systematic Position of the Fossil Bird Palaeospiza bella Allen."

In order that the Bureau may keep in touch with press comments on its work, particularly editorial criticism, favorable or otherwise, and unusual natural history notes, the assistance of field representatives in all parts of the country is solicited. A small pad of gummed "Press Clipping" slips (Form Bi-599) will be furnished on request to those not already supplied. Clippings may be readily attached to these and on them should be written the



name and date of the publication and name of the person mailing them. Though not essential, the use of the slip is recommended in sending in a clipping in order to insure notation of date and place of publication. Some few clippings that have been received are rendered useless by failure to supply these data. Important items regarding other branches of the Department may be sent to the Bureau in the same manner and when received will be forwarded to the central press clipping office of the Department.

### BIOLOGICAL INVESTIGATIONS

E. A. Goldman left Washington on October 20 for the Yellowstone Park region to investigate conditions regarding the migration of elk from the higher summer range to the lower wintering areas. This investigation is undertaken in cooperation with the Forest Service, the National Park Service, and the Montana Game Commission. The primary object is to study conditions in the Gallatin Valley in Montana and in the mountain areas tributary to it, and to devise means of diverting an increased number of elk to favorable wintering grounds.

Vernon Bailey recently brought some live bats from the Shenandoah Valley, Virginia, where they were found hibernating in several of the numerous caves of that region. These are being kept in cold storage at various temperatures, with a view to determining some of the conditions surrounding their hibernation. The Bureau will be glad to receive notes from interested observers concerning caves where bats spend the winter or congregate during summer, or regarding roosting places in cliffs, buildings, or trees.

### ALASKA INVESTIGATIONS

Ernest P. Walker, chief Alaska game warden, has been called to Washington for a conference pertaining to Alaskan game matters in general. On his way from Alaska he will stop in Seattle, Wash., to look over boats suitable for Alaskan waters.

L. J. Palmer, assistant in charge of reindeer investigations in Alaska, with headquarters at Nome, has reached Washington and will probably remain in the city through the winter, preparing reports on the results of the work accomplished during the past two years.

Eight permits were issued to citizens of Alaska during October to capture land fur-bearing animals for propagating purposes. This industry in the Territory is fast becoming an important one, and many thousands of dollars have already been invested. Minks and martens are the main fur bearers for the capture of which permits are issued.

### ECONOMIC INVESTIGATIONS

Last winter a number of wolves, including three black ones, were reported by different stockmen east of Lodgegrass in the Wolf Mountains in Montana. Hunter Floyd H. Hawks was recently assigned to this territory and



succeeded in trapping an almost black, three-legged animal, half wolf and half dog. A week or ten days later, in the same vicinity, he trapped a vicious wild dog similar to an airedale, and without doubt the sire of the half breed. When trapped it was with a large wolf, judging from the tracks in the trail where the two came down. R. E. Bateman, leader in predatory animal control in Montana, believes that, except for one or two full-blooded animals in the pack, the majority of these wolves are half breeds.

O. E. Steph1, rodent control leader in Montana, has investigated damage by porcupines to gardens of employees of the U.S. Fish Hatchery, near Bozeman. Ever-bearing strawberry plants were damaged, as well as the bark of trees, lettuce, green peppers, sweet corn, half-grown Hubbard squashes, and peas. After consuming windfall apples, the porcupine shook off additional fruit. It was considered that porcupines must have enormous appetites or that many individuals must be responsible for the damage. One of the most interesting observations was that they were not, as usual, attracted by salt.

L. J. Goldman, leader of predatory animal control in Idaho, reports placing over half a million baits last spring, and excellent results in killing coyotes. Two red foxes and several skunks were the only fur bearers poisoned so far as known. Mr. Goldman states that he has never found a marten or a mink poisoned.

A sheep company on the Targhee National Forest, Idaho, reports a loss of approximately \$3,000 through depredations by bears. Other stockmen on this forest report an average loss of 50 sheep per band similarly killed. Mr. Goldman states that during the past three months 10 bears have been taken from this section, but that there are plenty remaining. Coyotes are said to be very scarce, but depredations by bears have increased, due to shortage of berries and other natural food.

According to E. F. Fope, assistant leader in predatory animal control in New Mexico, Hunter J. S. Felkman works barefooted. Mr. Felkner doesn't seem to mind the Malpais thorns but admits that rattlesnakes often make him display acrobatic ability. His record for September was 27 coyotes, 4 bobcats, and 2 badgers.

C. J. Bayer, leader in predatory animal control in Wyoming, reports that a sheep owner of Lonetree, Wyo., had six sheep killed on July 28, and four on August 3 on the north slope of Gilbert Peak on the Uinta National Forest in Utah. The killing was done by black and brown bears.

L. C. Whitehead, leader in rodent control in Texas, writes that fully 90 per cent of a good stand of pecan seedlings were destroyed at Tyler, Tex., by pocket gophers, the damage being estimated at \$300. Some 4 and 5 foot budded paper-shell pecan trees were also destroyed.

Badgers digging into the fills along the roadbed on the Rio Grande Division of the Sante Fe, near Lava, N. Mex., so undermined the track as to cause its collapse and the wreck of a passenger train. Fortunately, however,

no lives were lost. E. F. Pope interviewed the section foreman early in September and gave demonstrations in badger poisoning. The superintendent of the Rio Grande Division, as well as the foreman of this section, have written, expressing satisfaction over the results obtained in this successful piece of cooperative work.

S. A. Hook, a Missouri hunter, reported trapping a 68-pound wolf in September in Harrison County, a few miles from the Iowa line. W. A. Mullins, leader in predatory animal control in the State, says this wolf is the first taken by Federal or State hunters in the State north of the Missouri River.

Excellent catches of coyotes were reported in the high country in California during October, and generally good results are in evidence over the State, according to C. G. Poole, leader in predatory animal control in the State. The outstanding feature of the month's work was the capture by Hunter E. G. Kindelt of an outlaw coyote on a ranch in Sonoma County. This coyote, a female, has for several years been the terror of the sheepmen in the southern part of Sonoma County and has caused many thousands of dollars' loss in sheep and poultry, killing on this one ranch about 600 sheep in the past two years. This coyote evidently killed purely for the love of it, seldom eating any of its victims.

The head of a coyote sent from Delta, Colo., and examined in the laboratory of the Bureau of Animal Industry, at Denver, Colo., has been declared positive for rabies, the State bacteriologist confirming the diagnosis. This is the first time rabies has ever been reported from this section of Colorado, and it is thought unlikely that this case is a spread from the Gardner or San Luis Valley region, where two outbreaks have recently occurred. S. P. Young, leader in predatory animal control, thinks it possible that it came from eastern Utah, where sporadic cases have occurred from time to time.

A range rider near Dubois, Wyo., reports finding an adult Hereford bull killed by a grizzly bear, near Lava Mountain on the head of Wind River, about September 10. The ground had been torn up and the bull had received several claw marks before it was finally killed.

While H. R. Wells, rodent control leader, of South Dakota, was at Fort Pierre the matter of rat control in Stanley County was discussed at a public meeting. It is only recently that rats have become numerous enough in this county to attract more than passing notice, but at present they are a very serious pest in many localities. The owner of one ranch reports the loss of 175 bushels of corn in the crib, 75 bushels of barley, and 400 young turkeys and eggs. Rat depredations were noticeable even in the fields. A demonstration will be conducted on the ranch this winter. Mr. Wells also visited Inlay, S. Dak., during September to perfect plans for destroying field mice and kangaroo rats. The soil there is very sandy but supports luxuriant vegetation and seems especially well adapted for rodent life. Farmers in the vicinity report unusual losses from a variety of rodents, and one states that in addition to \$1,200 loss in watermelons due to mice and kangaroo rats, he has suffered heavy losses from pocket gophers in alfalfa fields. Complaints also were received of damage by pack rats around houses and barns.



During August and September, Ray Huntley, a South Dakota hunter, took fourteen coyotes and one bobcat which had killed several hundred sheep on two ranches in Harding County. Twelve of the coyotes proved to be cripples, all having previously lost a foot or some toes in traps. On a visit to one of the ranches Louis Knowles, leader in predatory animal control in the State, learned that over 200 sheep and lambs had been killed there since the middle of May, and as the ranchman received \$6.51 per head for his 1924 lamb crop he estimated his loss at more than \$1,200 in a period of about three months. Loss on the other ranch was not so heavy, being estimated at about \$600. This brings the total cost of the depredations by these 14 coyotes to \$1,800 this season.

Hunter L. D. Jandreau, of South Dakota, caught a poultry-killing coyote in Gregory County with a record against it of more than 100 turkeys and chickens at one farm. The turkeys were valued at \$6 each.

Miss Mabel Alexander has resigned as stenographer in this division, effective October 25, completing nearly seven years' service with the Department and nearly five with the Biological Survey. Miss Alexander was first appointed in May, 1918, and was transferred to the Bureau from the Office of the Secretary in April, 1920.

M. A. Stewart assumed duty as junior biologist in the Eastern Rodent Control District, with headquarters at Washington, D. C., on October 17.

L. L. Englund was appointed field assistant in predatory animal work in the Washington District, effective November 1.

W. C. Echols, I. L. Ritchies, and J. A. Young were appointed special field assistants in predatory animal work in the New Mexico District, November 1.

#### FUR RESOURCES

Extensive experiments are planned for breeding silver, cross, and red foxes this coming season at the Experimental Fur Farm, Saratoga Springs, N. Y. Four silver foxes were purchased recently, making a total of 12 pairs at the farm.

Mr. Ashbrook recently returned from a visit to the Experimental Fur Farm and reports the new laboratory and six new fox breeding pens completed.

Dr. Karl B. Hanson visited the Vermont Silver Fox Farm, at Chittenden, and the Sheffield Silver Fox Ranch, at Northampton, Mass., where he conducted cooperative investigational work in further experimentation with carbon tetrachlorid for the treatment of hookworms.

#### FOOD HABITS RESEARCH

An inspection of the duck food conditions of Back Bay, Va., was made in October by C. C. Sperry, a scarcity of aquatic plants there having caused apprehension on the part of sportsmen. The evidence indicates that this



scarcity was due to a period of excessive salinity of the water. This now has become nearly fresh again, and stands of young growth at several points show that the aquatic plants of that favorite ducking ground are reestablishing themselves.

#### GAME AND BIRD RESERVATIONS

Mr. Riley started on October 18 on an inspection trip to bird refuges in Arkansas and the Southwest, after which he will visit the big game preserves.

Due to severe weather conditions, with heavy snows, large numbers of elk were driven down from the mountains into Jackson Valley, Wyoming, in October. As the hunting season had started, the elk were subjected to sustained bombardment and an unusually large number of the animals are said to have been killed before they could reach the Elk Refuge. Individuals and organizations petitioned the State Government to close or curtail the hunting season in Teton County, and some of the ranchers closed their lands to hunting. While the snow had disappeared from the lower lands in the valley, it was still deep in the mountains at the first of the month. The elk, therefore, remained in the valley unable to get away from the hunters. At the close of October, A. P. Nelson, warden of the Elk Refuge, reported that approximately 900 elk were on the reservation, about six weeks ahead of the time they usually arrive.

George M. Benson, warden of Lake Malheur Reservation, reported the fire still burning the first of the month on certain areas in the vicinity, but not where it was likely to prove dangerous. He states that birds are coming to the refuge, but it seems to serve only as a resting place, owing to the fact that the main feeding places are dry. On October 17, the warden reported that many white-fronted and snow geese were flying about and resting on the refuge. On the 18th, about 300 sandhill cranes arrived, and several hundred swans and large flocks of ducks left the refuge.

W. D. Parker, warden of Sullys Hill Game Preserve, reports that northern ducks have arrived in large numbers. A four-year-old buffalo bull from this preserve was presented to the city park at Minot, N. Dak. He was in fine condition and was crated with very little trouble. In accordance with plans for the disposition of surplus animals from the herds at Sullys Hill, an elk was killed and sold to a lodge in Devils Lake, N. Dak., for a banquet.

Very low water is reported on the Big Lake Bird Reservation, Ark., and on the Belle Fourche Bird Reservation, S. Dak. George M. Wilson, warden of Belle Fourche Reservation, writes that there have been large numbers of game birds on the refuge this season.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Denmead, deputy chief game warden, spent October 31 and November 1 on the Black Water Marshes in Dorchester County, Md., and found a large number of marsh ducks there, most of which it is believed were locally bred.

The weather was mild, but most of the hunters reported fairly good bags of black ducks, mallards, and pintails. Mr. Denmead received reports of numerous ducks on the Susquehanna Flats, at which point the season did not open until November 3. It is understood that redheads are more numerous than any other duck at that point.

The Paul J. Rainey Wild Life Sanctuary, a tract of about 26,000 acres on the Gulf coast of Louisiana, donated to the National Association of Audubon Societies by Mrs. Grace Rainey Rogers, a sister of Paul J. Rainey, deceased, is being administered by the Bureau of Biological Survey. The sanctuary, which will also be endowed by Mrs. Rogers, is a form of memorial to perpetuate the name of her brother, whose interest in all matters that pertain to wild life was well known. Meriweather Donaldson, of Paragould, Ark., was appointed warden in charge, and Richard Gordon, of Valparaiso, Ind., as an assistant to him, both appointments becoming effective on November 1. U. S. Game Warden Britton, who has been temporarily in charge of the sanctuary pending the appointment of a permanent warden, will return to his district in New Mexico some time in November.

To Warden Facetti goes the credit for making the largest seizure of plumes since the Federal game law became effective. On October 9 while at Miami, Fla., Mr. Facetti seized from one individual 223 full backs of American egrets, 15 full backs of snowy herons, 1 full back of a great blue heron, and 93 strands of aigrettes. The violator was arraigned before a United States Commissioner and required to furnish bond in the amount of \$1,000 for appearance before the Federal court. The market value of the plumage, if it could be sold, would total many thousands of dollars.

On October 27 at Paris, Tex., 27 cases obtained by Warden Riddick, for killing and possessing robins, and 1 for killing swans, were terminated by pleas of guilty, resulting in fines totaling \$175. Five of the offenders were fined but one cent each, for the reason that each had been previously arraigned in State court and required to pay fines of \$21.70.

The following is contained in a letter received from Warden B. E. Smith, concerning observations made while conducting investigations in Vermont: "Charles Blow, Special State Warden, has charge of this reservation (situated along the shore of Lake Champlain in Vermont) and blows a whistle when it is sunset and time to stop shooting. One minute after the whistle is blown, out of the reservation come thousands of black ducks and alight all around the blinds to feed on the wild oats and rice growing there. The ducks seem to know the signal of safety."

Kenneth F. Roahen, the United States Game Warden at Havana, Ill., who was appointed September 1, has secured 16 substantial cases during his two months of active duty. Several of the cases have already been disposed of by payment of fines.

Following are quoted observations of game conditions made by wardens during October:

From the report of Warden O. D. Steele, Council Bluffs, Iowa, for



October 11: "The flight of American bitterns has been noticeably heavy all the fall. The 16th of September they were to be found in large numbers nearly everywhere and they arrive from the north just after sunset by the thousands. Natives report they have never seen the equal in numbers. The flight is still going and is heavy at this writing."

Warden Riddick, Houston, Tex., observes in his weekly report for October 25: "Sunday and Monday of this week I saw thousands of doves around San Antonio. Along the north side of the International and Great Northern Railway at San Antonio I saw lots of doves, notwithstanding the fact that the season had been open for shooting them more than six weeks, but on the south side of the same railroad there were thousands of mourning doves. Late in the evening one could see them coming into the watering holes in bunches of hundreds. It reminded me of ducks coming into their roosting grounds about dark where they had never been shot or molested. Texas has a world of mourning doves this year - old settlers here tell me they never saw more."

A reprint of 60,000 copies of the Game Laws for 1924-25 (Farmers' Bulletin No. 1444) is now off the press and available for distribution.

The following appointments were made to the position of U. S. deputy game warden during October:

Basil J. Whitley, 2920 Travis Ave., Fort Worth, Tex.  
Alfred B. Rolling, Sta. "B", R.D. No. 2, New Orleans, La.  
Fred G. Wiley, Laurel, Del.  
Geo. G. Thompson, Monticello, Fla.  
C. Drummond Jones, Grant's Farm, Affton, Mo.  
Phillip Woolford, Lusby, Md.  
Lawrence J. Mrovka, 327 Park Ave., Collinsville, Ill.  
Ralph E. McIntyre, Doniphan, Kans.  
William G. Marsh, Onancock, Va.  
Reuben E. Bisbee, Ford, Kans.

Appointments of the following U. S. deputy game wardens were terminated during October:

Warren L. Sessler, 915 S. State St., Havana, Ill.  
Wm. F. Nichols, 1205 Military Ave., Baxter Springs, Kans.



## Cases Terminated - Reports Received During October

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barmeier and Thrasher*	1	Missouri	Selling ducks	\$50
Berghoff*	1	"	Killing a duck in close season	\$1 and costs of \$19.70
Farnham and Kelley**	1	Pennsylvania	Attempting to kill swan	\$10
Perry	1	Mississippi	Killing wood ducks	\$25
Petree*	3	New Mexico	Killing ducks in close season	\$10 each
Roahen	2	Illinois	Killing wood ducks	\$25 each and costs of \$11.80 each
"	1	"	Hunting ducks after sunset	\$25 and costs of \$11.80
"	2	"	Hunting ducks after sunset	\$10 each and costs of \$11.65 each
Roahen and Charlton	1	"	Killing wood ducks	\$25 and costs of \$11.80
Steele, O. D., DeVries**, and Van de Meide**	1	Iowa	Killing ducks in close season	\$10 and costs of \$12.50
Steele, O. D.	2	"	Killing ducks in close season	\$15 and costs of \$12.50 each
"	1	"	Killing yellowlegs in close season	\$15 and costs of \$12.50
"	1	"	Killing ducks in close season	\$10 and costs of \$12.50
Smith	1	Maine	Killing a tern	\$5
Tonkin	1	Oregon	Possessing ducks in close season	\$25
Visart	3	Arkansas	Hunting ducks from motor-boat	\$10 each

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

## Cases Reported for Prosecution

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>
Barmeier	1	Illinois	Killing killdeer
"	1	Missouri	Wounding a grebe
Linebaugh	1	Kentucky	Killing doves in close season
Magbee*	6	Georgia	Killing bullbats
Riddick	1	Texas	Selling ducks and curlews
Riddick and Maxon*	2	"	Killing doves in close season
"	3	"	Killing doves in close season and sandpipers
Roahen	3	Illinois	Hunting ducks after sunset
"	6	"	Killing wood ducks
Scholler*	2	"	Possessing sandpipers
"	2	"	Possessing insectivorous birds
Steele, O. D.	1	Iowa	Killing ducks in close season
Whitehead and Norrell**	1	Georgia	Killing bullbats

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\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

# THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Vol. 5

Washington, D. C., December 18, 1924

No. 12

Office of the Chief of Bureau,  
December 18, 1924.

A MERRY CHRISTMAS and A HAPPY NEW YEAR to all fellow workers in the service of the Biological Survey. You are widely scattered throughout the United States and in far off snowy Alaska, the isles of the Pacific, and in Central America. Wherever you may be, I know the fine spirit which animates your work and wish to take this opportunity of expressing my appreciation of the service you are giving and to extend to you all and to your families my heartiest good wishes.

*E. W. Nelson*

## GENERAL NOTES

The Biological Survey was represented at the Eleventh National Game Conference of the American Game Protective Association, held at the Waldorf-Astoria Hotel, New York City, December 8 and 9, by Doctor Nelson, Chief of Bureau, and the following members of the staff: W. C. Henderson, Dr. A. K. Fisher, G. A. Lawyer, E. A. Goldman, Talbott Denmead, Dr. T. S. Palmer, and H. L. Stoddard. The program included addresses by Doctor Nelson, on "The Need of a Practical Viewpoint on Game Administration"; by Doctor Palmer, on "Lest We Forget"; and by Mr. Stoddard, on "Recent Developments in Game Breeding, Disease Control, and Biological Investigations."

F. C. Lincoln, of the Division of Biological Investigations, and H. L. Stoddard, in charge of the cooperative quail investigation, with headquarters at Beachton, Ga., represented the Biological Survey at the combined meeting of the Wilson Ornithological Club and the Inland Bird Banding Association, held at Nashville, Tenn., November 28 to 30. Mr. Stoddard is treasurer of the Inland Association, and gave an illustrated talk on the bird life of the islands at the mouth of the St. Lawrence, based on material gathered by him on a trip to the region several years ago. Mr. Lincoln presented a paper dealing with problems it is expected to solve by the bird-banding method of study and with some results already obtained. The Biological Survey films "Anne's Aigrette" and "Louisiana Coast Bird Refuges" were shown and explained by Mr. Lincoln, who added personal experiences in colonies of egrets and other herons in the South and at the gull and tern colonies which formed the subject of the latter film.



Doctor Nelson returned to Washington on November 26 after an absence of several weeks on official business in the West, conferring with field representatives and cooperators of the Bureau.

The following publications of the Bureau were issued in November:

"Report of Chief of Bureau of Biological Survey," by E. W. Nelson. Released December 2.

"The European Hare in North America," by James Silver. Journal of Agricultural Research, Vol. 28, no. 11, pp. 1133-1137, 1 map. Received November 25.

Among manuscripts submitted for outside publication in November were:

Ashbrook, Frank G. "The Fox-Farming Industry."

-----"Fur Farming--A New Field for the Animal Husbandman and Farmer."

Bailey, Vernon. "Bats of the Carlsbad Caves."

-----"Do Squirrels Drink?"

Gabrielson, Ira N. "The Golden Mantled Squirrel: Callospermophilus chrysoderius chrysoderius."

Malloch, J. R. "A New Borborid from Maryland (Diptera: Borboridae)."

-----"Synopsis of New World Flies of the Genus Sphaerocera (Diptera: Borboridae)."

McAtee, W. L. "European Species of Eupteryx in the United States (Homoptera: Eupterygidae)."

-----"Introduction Upon Introduction."

-----"Note on the Crested Mynah."

-----"Records of Species of the Genus Erythoneura (Homoptera: Eupterygidae) with Descriptions of New Forms."

Nelson, E. W. "Saving the Southern Yellowstone Elk Herd."

Preble, E. A. "The Arctic Puffin (Fratercula arctica)."

-----"The Crawfish and Its Burrow."

-----"The Jabiru, an American Stork."

-----"Metamorphosis of the Spring Frog."

-----"The Tragedy of the Milkweed's Guests."

-----"The Yellow Swallow-tailed Butterfly."

Scheffer, Theo. H. "Activity of the Pocket-Mouse."

-----"Mentioning the Mole."

Taylor, W. P. "Cooperation Among Scientific Men."

Young, Stanley P. "The Coyote and Examples of Its Persistency."

With this issue THE SURVEY accomplishes five years of service -- we were about to say existence, but the more lively word seems justified by the occasional friendly line which comes to our attention showing that our "house-organ" really fills a need, particularly among our widely scattered field people, for whom it helps to coordinate the varied activities and interests of the Bureau. These friendly comments also encourage us in starting all over again, turning over a new leaf, and beginning another volume -- the sixth.

## BIOLOGICAL INVESTIGATIONS

Mr. Goldman returned to Washington, November 28, from Yellowstone National Park and national forests in Montana, where, in cooperation with the Forest Service and National Park Service, investigations were made of big game conditions with special reference to securing better distribution of elk on winter ranges in Montana. En route east Mr. Goldman stopped in North Dakota to examine a section of the Bad Lands along the Little Missouri River, the setting aside of which as a National Park or Game Refuge has been suggested.

## ALASKA INVESTIGATIONS

U. S. Game Warden Terhune is in charge of the Juneau office during Mr. Walker's absence from Alaska.

Alexander Hately has been appointed U. S. game warden, with headquarters at Bethel, his district being the lower Kuskokwim region. He began active duty on November 26. Mr. Hately was formerly a Territorial game warden under Governor Bone.

Capt. H. C. Larsen, of Nome, Alaska, who is employed as navigator of the Hazel, used in reindeer investigation work during the navigation season on Bering Sea, was a welcome visitor at the Bureau early this month. He was on his way to Denmark to visit his parents during the holiday season, and will return to Alaska in the spring.

As a result of the activity of game wardens during the past three months a number of arrests and seizures have been made in southern and southeastern Alaska for violations of the game laws. Warden Hard, at Anchorage, reports the arrest of three natives for killing mountain sheep out of season and exceeding the bag limit on these animals, and of three Chinamen for hunting out of season. The guns of the Chinamen were confiscated. Chief Warden Walker and Warden Goddard, of Sitka, made reports of 16 arrests and seizures for the illegal hunting of deer, including females and fawns.

## ECONOMIC INVESTIGATIONS

While visiting his trap lines in October John Sauvola, a Michigan hunter, had the unusual experience of coming across two large buck deer that were fighting and had locked horns. After a struggle with the deer, he succeeded in getting them apart, a thing which they could not have done without his assistance.

When W. A. Mullins, leader in predatory animal control in Missouri, arrived at the camp of Hunter S. A. Hook near Unionville he found that Mr. Hook had three sheep-killing coyotes chained up, and excitement was running high among the farmers, who could scarcely believe their own eyes. After repeated failures to take coyotes in any manner, local farmers had concluded that it could not be done. On Sunday, October 26, more than four hundred persons from adjoining counties came to the camp to see the coyotes, and, of course, all wanted Mr. Hook to come to their community.



Hunter M. M. Karlen, of South Dakota, moved to a farm in Hughes County, September 30, where coyotes had been preying upon prize turkeys. The farmer had lost a number of these valuable birds as well as all of the year's lamb crop from one flock, and placed his loss at \$400. On October 5 Mr. Karlen had trapped one coyote, shot another, and also had shot and wounded a third which he did not find. He stayed at this farm until October 11, during which time he trapped two more coyotes, which, together with his traps, were stolen. This short time brought killings by coyotes at this place to an end. It developed a good deal of opposition among local hunters, however, who wanted the coyotes left until the fur was prime so that they could hunt them for sport and receive bounty and a fair price for the skins. The farmer stated that during the past four years coyotes had destroyed over \$1,200 worth of his poultry, lambs, and pigs while these men continued to hold coyote hunts and drives each winter.

Federal Hunter Howes took 18 coyotes and 2 bobcats on the Black Hills National Forest, and on the Harney National Forest State Hunter Bebbington took 14 coyotes, making 34 predatory animals taken from game sections and from localities near where the Forest Service is planning considerable sheep grazing next year. Most of the catch of these two hunters was made from country from which coyotes migrate during the midwinter months, and much of this migration passes the vicinity of Wind Cave Reservation.

H. R. Wells, leader in rodent control in South Dakota, spent part of September in the Hardy and Black Buttes districts of the Black Hills National Forest making a preliminary survey of pocket gopher damage and planning control measures. While the infestation extends well over the whole of this area, the greatest damage is inflicted along the Grand and Little Spearfish Valleys, and in a number of places fields had been abandoned because of the great abundance of pocket gophers. Ranchers are anxious to organize a campaign and gave assurance of cooperation. The Forest Service is cooperating in a more complete survey of this region, which will be completed in ample time to consider plans for spring work.

The cranberry bogs in Grays Harbor County were visited during October by Leo K. Couch, leader in rodent control in Washington, to observe mouse conditions. He found that where mice had caused \$2,000 damage last year, two earlier applications of poisoned grain seem to have cleaned them out.

On several of the national forests in Utah porcupines are seriously injuring timber, particularly trees which were planted within the past few years. In some localities the animals seem to be increasing at a startling rate, one of the rangers on the Manti Forest having shot 32 of them in a day's ride. This, of course, was exceptional, but the ranger states that he sees large numbers of porcupines whenever he rides over his part of the forest.

A recent letter from the Forest Service relative to the extent of damage by porcupines in national forests states that one inspector has reported considerable damage this summer to yellow pine in the Fremont National Forest, Oregon. On a measured half acre covered with young yellow pine, 42 of the 51 trees were found severely damaged by porcupines, the injury being in the form of girdling the trunk or removing the bark from 3 to 10 feet in the top of the



crown. In this particular area, 15 adult porcupines were found and killed. Last summer damage was noted by the same inspector in the young yellow-pine stands in the San Juan National Forest, Colorado, and the Coconino Forest, Arizona.

L. C. Whitehead, leader in rodent control in Texas, writes that jack rabbits have been present in large numbers this summer, the drought having driven them into fields where they have inflicted great damage to the crops. Two ranches near Odessa were visited by Mr. Whitehead, on one of which, through a continued patrol of the fields, the owner was able to save at least \$1,200 worth of cotton. Approximately 40 per cent of his crop on 70 acres was destroyed as was 70 per cent of the replanted maize. On the other rancher's 200 acres, which lay in a flat surrounded by luxuriant grass pasture and several sections of mesquite brush, not a stalk of cotton remained. A buffalo-grass pasture flat adjoining the erstwhile cotton field also lay in the "draw", and distinct trails led from the brush into it and into the grassy pasture adjoining. Mr. Whitehead one evening noted a number of jack rabbits across the field and in the edge of the mesquite. Walking into the pasture about 200 yards and cutting back to his car he saw 50 or 60 rabbits bounding away toward the mesquite. There are numerous salt flats in this section, to which according to reports, the jack rabbits drift at dusk, in regular droves, until one would think they were herds of sheep.

M. E. Musgrave, leader in predatory animal control in Arizona, announces that former predatory animal hunter and trapper W. A. Knibbe has returned to the service. Mr. Knibbe has been with the Immigration Service for several months but says he just naturally likes to hunt, so we welcome an old friend back on the job.

Miss Mae I. Kivilin has resigned as stenographer in this division effective November 29. On November 27 she was married to Mr. F. J. P. Haske, of Cleveland, Ohio, and will make her home in that city. Mrs. Haske, who entered the service of the Department on June 18, 1918, and was transferred from the Bureau of Plant Industry to this division on May 25, 1923, leaves many friends in the Bureau all of whom wish her every happiness.

#### FUR RESOURCES

Mr. Ashbrook attended a Fur Week Rally conducted under the auspices of the Fur Club, Inc., at the Hotel Astor, New York City, on November 16. An elaborate program was arranged for the more than 3,000 people attending. Heads of fur trade associations gave short talks and Mr. Ashbrook spoke on the cooperative work being carried on between the Department of Agriculture and the National Association of the Fur Industry.

The American National Fox Breeders Association held its first live-fox exhibit and style show in Minneapolis, November 17 to 22. Mr. Ashbrook and Dr. Karl B. Hanson attended both the show and the business meetings of the association. The 570 live foxes on exhibition from 35 States made probably the largest and finest silver fox show ever held in the United States.

Breeding experiments will be conducted with red, cross, and silver foxes--12 pairs in all--at the experimental fur farm this coming winter. These animals have been put in their respective pens for mating.

The new laboratory building at the farm has been completed and all the equipment set into place. Studies are made in this laboratory of diseases and parasites of fur-bearing animals in captivity.

#### FOOD HABITS RESEARCH

After the close of the A. O. U. meeting at Pittsburgh, Mr. McAtee visited Presque Isle, in the vicinity of Erie, Pa., for the purpose of making a study of the food resources of wildfowl and upland game on the island. This was done at the request of the Pennsylvania Board of Game Commissioners, and at the close of the investigation recommendations for improving this area were submitted to the State officials.

#### GAME AND BIRD RESERVATIONS

The Izaak Walton League of America has started a movement to raise, within a short time, \$100,000 for the purpose of purchasing lands in Jackson Valley, Wyoming, to make them available to the Federal Government as an addition to the Elk Refuge. Extensive feeding grounds will thus be provided for the remnants of the former vast elk herds to render unnecessary frequent emergency appropriations for their benefit from Federal and State funds for the purchase of hay to see them through unusually severe winters. An abundance of hay will be stored at this refuge and broad areas of natural pastures will become a safe winter home for thousands of elk. The acquisition of these lands will make a most desirable Christmas gift to the American elk by saving them from threatened starvation and in a patriotic way will make a notable contribution to future Americans by insuring the perpetuation of these most magnificent of all deer.

Approximately 2,000 elk were on the Elk Refuge at the first of December.

Plans for the disposal of the surplus buffalo and elk on the big game preserves are being carried out at the Bison Range, Wind Cave, Sullys Hill, and Niobrara Reservations.

L. L. Bryan, warden of the Big Lake Bird Reservation, Ark., reports that a few ducks are coming south, but do not stop at the refuge for more than a day or two since the water there is extremely low.

George M. Benson, warden of Lake Malheur Bird Reservation, Oreg., states that early in November a great many swans were feeding in the flooded meadows near a grain camp on the Blitzen River. Some of the swans, going south, flew low over the refuge and it was apparent that they were very thin. Several stayed at a big spring on a neighboring ranch and were apparently too weak to make the trip south. They were not disturbed by anyone approaching them. Other swans resting in the vicinity on the Spring Branch were reported

dying in numbers. Warden Benson put one in a pen in an effort to save it by feeding, but it died soon after its capture. The swans found dead by the warden were not crippled but had died either from disease or starvation. The birds were large, but greatly emaciated.

Warden Benson reports also that 33 ravens were killed lately in the vicinity of the refuge, 24 of them by the warden. Five skunks and one coyote also were taken.

Hunters in the vicinity of Lake Malheur, Oreg., stated that they had obtained very few birds in comparison with former years.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Lawyer returned to the Washington office on December 2 after an official trip of several weeks in the Middle West and South.

An order was issued by the Acting Secretary on November 21, permitting the Commissioner of Inland Fisheries and Game of Maine and his regular full salaried employees to shoot mergansers and great blue herons on rivers, lakes, and streams inhabited by game fish within the State for the purpose of protecting these fish. The order provides, however, that no herons may be killed in or near rookeries.

Thousands of ducks are to be found this season on the Potomac below Washington and excellent shooting is reported. Some of the Bureau officials on a trip, December 5, observed at least 50,000 ducks on the river within 25 miles of Washington. Three-fourths to four-fifths of them were canvasbacks, the others including black ducks, scaups, mallards, golden-eyes, green-winged teals, ruddies, and redheads. Two hundred to three hundred Canada geese also were seen and thousands of coots. There appears to be a great increase in migratory waterfowl on the Potomac this year over 1923.

Reports from eastern and western Missouri are to the effect that more ducks and geese are present this fall than for several years. Some of the old residents in the Havana, Ill., section of the Illinois River state that they do not remember seeing any season as many ducks as were present at the beginning of December. Warden Roehen reports that on November 29 literally clouds of ducks were flying in every direction, which included heavy flights of canvasbacks.

Warden Pacetti states in his weekly report for November 21: "I have not seen so many coots in 25 years, as the waters everywhere were black with them but no one was shooting them."

The Bureau learned with regret of the accidental death at Fort Myers, Fla., on November 19, of Deputy Arba H. Bridges, formerly of Minneapolis, Minn. The Bureau is advised that the fatality was caused by the overturning of a tractor.



The following appointments were made to the position of U. S. Deputy Game Warden during November:

Fred L. Cofer, 1024 James Bldg., Chattanooga, Tenn.  
 Henry Fox, Mercer University, Macon, Ga.  
 William L. Hayes, 509 South Seventh Ave., Pocatello, Idaho.

Appointments of the following U. S. Deputy Game Wardens were terminated during November:

William T. Skaggs, Lenora, Kans.  
 Robert F. Christ, 840 South Fifth St., Quincy, Ill.

Cases Terminated - Reports Received During November

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Birsch, Hope**, and Johnson**	1	Virginia	Killing snipe in close season	\$10
Birsch	7	North Carolina	Killing ducks in close season	\$10 each
Farnham	1	Pennsylvania	Killing a heron	\$10
Hoffman, Oberhaus*, Bragdon*, Moody*	1	Alabama	Exceeding daily limit on coots	\$5
Hoffman, Oberhaus*, Bragdon*, Moody*	1	"	Hunting ducks after sunset	\$5
Hoffman, Oberhaus*, Bragdon*, Moody*	1	"	Hunting ducks prior to half hour before sunrise	\$5
Hoffman, Oberhaus*, Bragdon*, Moody*	1	"	Killing ducks from motorboat	\$5
Hoffman and Ober- haus*	1	"	Killing a grebe	\$1
Riddick and Maxon*	1	Texas	Killing doves in close season	\$10
Riddick and Sammons**	1	"	Killing sandpipers	\$20
Roahen and Landes*	2	Illinois	Hunting ducks after sunset	\$25 and costs of \$11.80 each
Scholler*	1	"	Possessing ducks in storage in close season	\$25
Steele, O. D.	2	Iowa	Killing ducks in close season	\$25 and costs of \$15 each
Steele, O. D., and Cooney*	1	"	Killing ducks in close season	\$25 and costs of \$15
Visart	1	Oklahoma	Killing coots in close season	\$25
"	1	"	Hunting coots in close season	\$15
"	2	Arkansas	Killing ducks after sunset	\$5 each

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

## Cases Reported for Prosecution

<u>Warden</u>	<u>Case</u>	<u>State</u>	<u>Violation</u>
Barmeier and Maitland**	2	Missouri	Hunting ducks after sunset
"	1	"	Killing ducks after sunset
Fleming*	1	Indiana	Killing ducks in close season
Hilliard and Pierce*	2	New Jersey	Hunting ducks after sunset
Hoffman, Moody*, Oberhaus*, and Bragdon*	1	Alabama	Exceeding limit on coots
"	1	"	Hunting ducks after sunset
"	1	"	Hunting ducks prior to half an hour before sunrise
"	1	"	Killing ducks from a motorboat
Hoffman and Oberhaus*	1	"	Killing a grebe
Magbee*	1	Georgia	Possessing a great blue heron
Pierce*	1	New Jersey	Hunting ducks after sunset
Roahen	4	Illinois	Killing coots from motorboat
Roahen and Landes*	2	"	Hunting ducks after sunset
Scholler*	2	"	Killing insectivorous birds
"	2	"	Killing insectivorous birds
Steele, O.D.	1	Iowa	Killing coots after sunset
"	5	"	Hunting ducks after sunset
Visart	2	Arkansas	Killing ducks after sunset
Whitehead and Magbee*	1	Georgia	Killing a duck in close season

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\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden





